DOCUMENT RESUME

ED 067 515 AA 001 046

AUTHOR	Chow, Stanley; And Others
TITLE	Drug Education. PREP-36.
INSTITUTION	National Inst. of Education, Washington, D. C.
REPORT NO	DHEW-OE-72-9; PREP-36
PUB DATE	72
NOTE	87p.
AVAILABLE FROM	Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402 (Cat. No. HE5.212:12090, $1.00)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Adult Education Programs; *Case Studies (Education); Curriculum Development; Curriculum Guides; *Drug Education; Educational Research; Elementary Grades; Guides; Kindergarten; *Program Descriptions; Programed Units; Program Evaluation; *Program Planning; Resource Materials; *School Responsibility; Secondary Grades; Teacher Education; Teaching Techniques
IDENTIFIERS	PREP; *Putting Research into Educational Practice

ABSTRACT

What schools can do and are doing to prevent the abuse of drugs by their students is the focus of this report. The first section of the report "An Overview of Current Efforts" presents the findings of a one-year study of drug education in the United States, with a subjective analysis of the various approaches in the field. In the second section "Guide for the Drug Education Planner," specific guidelines for planning, implementing, and evaluating local drug education efforts are offered. "Case Studies," section three, presents detailed descriptions of 10 different approaches in the following locations: Coronado, California; State of Oregon; Duluth, Minnesota; Milwaukee, Wisconsin; Wayne County, Michigan; Seymour, Connecticut; Dade County, Florida; Maricopa County, Arizona; Parkway, Missouri; and Laredo, Texas. Six commercially developed programs are described in section four "Product Reports"; these are The Creative Learning Group Drug Education Program (K-Grade 9); Drug Education Program or Drug Abuse Decision System (DADs) (Grades 9-12); The Drug Experience: Data for Decisionmaking (Grades 7 and 8, but also used in Grades 6-12); Drugs: Insights and Illusions (Junior and Senior High School Students); Technicon Drug Decision Program (Grades 6-9); and Impact Plus Two and Why? (Grades 5 and 6 and Grades 7 and 8). A "Teacher's Guide to Resources in Drug Education" provides reviews, catalogs, resource handbooks, and compiled bibliographies on instructional aids and materials, curriculum ideas, and background information on drug education. Current ERIC entries on Drug Education Programs are listed, as are past PREP reports. (Author/DB)

ED067515

Putting
Research into
Educational
Practice

NIE
AA

Drug Education

PREP Report No. 36

AA-001 046

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE/National Institute of Education

PREP

PUTTING RESEARCH INTO EDUCATIONAL PRACTICE

- *a synthesis and interpretation of research, development, and current practice on a specific educational topic*
- *a method of getting significant R&D findings to the practitioner quickly*
- *the best thinking of researchers interpreted by specialists in simple language*
- *the focus of research on current educational problems*
- *a format which can be easily and inexpensively reproduced for wide distribution*
- *raw material in the public domain which can be adapted to meet local needs*
- *an attempt to improve our Nation's schools through research*

Use of funds for printing this publication approved by the Director of the Office of Management and Budget July 27, 1970.

DHEW Publication No. (OE) 72-9

Drug Education

PREP Report No. 36

by
Stanley Chow, Vicki Ertle, and David Keyes
Far West Laboratory for Educational Research and Development, Berkeley, California

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE/ National Institute of Education

Superintendent of Documents Catalog No. HE5.212:12090
U.S. Government Printing Office
Washington: 1972

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 Price $1.00

Drug Education

Introduction

What are other school districts doing about drug education? Should your district purchase one of the major commercially developed drug education programs? How do you go about planning and implementing a drug education program? In these pages, you should find the answers to these and other questions.

While this report is intended primarily for use by the school official responsible for initiating a drug education program or improving present efforts, it is likely that at least some of the sections will be of interest to anyone concerned with preventative drug abuse programs. "Preventative" is the key word; no effort is made to deal with rehabilitation and treatment. Those subjects are adequately covered in numerous other publications. Instead, the focus here is on what schools can do and are doing to prevent the abuse of drugs by their students.

If you are a drug education coordinator, mental health specialist, drug resource teacher, curriculum coordinator, or chairman of a curriculum committee on drug education, this publication was designed with you in mind. If you are a teacher, parent, student, community leader, or simply a concerned citizen, the material will be of value to you also.

Summarized in the section "An Overview of Current Efforts" are the findings of a year-long study of drug education in the United States, with a subjective analysis of the various approaches in the field, based on fact-finding trips to the programs studied.

The "Guide for the Drug Education Planner" is obviously directed to the person or persons responsible for planning programs. Offered here are specific guidelines for planning, implementing, and evaluating local drug education efforts. It does not pretend to offer a panacea, but should stimulate careful planning and serve as a working tool in the development of a project tailored to the specific needs of your school district.

The "Case Studies" offer detailed descriptions of 11 different approaches in as many localities. Each case study traces the program from its inception to its current state, describing philosophy, curriculum materials, and student and community reaction. These studies should be of special interest to curriculum coordinators and other administrators.

The "Product Reports" offer objective descriptions of six commercially developed programs. These reports should provide the school district representative responsible for recommending purchase of materials with enough information to decide whether or not to preview the program described.

The "Teacher's Guide to Resources in Drug Education" will assist the classroom teacher and curriculum planner in selecting reviews, catalogs, resource handbooks, bibliographies, and audiovisual materials for a drug education program.

AN OVERVIEW OF CURRENT EFFORTS

Drug educators have probably learned more than their students from the recent flurry of school activity designed to combat drug abuse. There is little evidence to show that any of the locally or commercially developed programs have been successful in changing student attitudes and behavior. In fact, as a result of the concern with drug education, the schools seem to be changing as much or more than the students.

These are some of the conclusions reached by education analysts at the Far West Laboratory who have surveyed the drug education scene for more than a year. Traveling to every corner of the Nation, making onsite evaluations in nearly a score of school districts, conducting mail surveys, and meeting with consultants, the analysts have completed what is probably the most exhaustive study of drug education to date. Here, in summary form is what they found:

School personnel involved in drug education can perhaps be divided into four groups.

There are the *Shotgunners*, aware of a drug problem among young people in their community and determined to do someting about it. But, instead of carefully planning a curriculum or comprehensive program, the Shotgunners seem to favor a hypodermic approach, feeling that a small injection here and there will eradicate a disease they do not understand.

The *Comprehensive Pharmacologists* have gone a step beyond the Shotgunners, planning exhaustive curriculums designed to impart hard information to everyone from the kindergartner to those enrolled in adult education.

Then there are the *Values Trainers*, whose districts may at first appear to have no drug education program at all. Having rejected most of what pharmacology has to offer, the values trainers turn to a humanization of their schools, implementing programs designed to develop values and decisionmaking skills among students.

Finally, there are the *Mixers* who find their answer in a mixed bag of approaches, combining what they hope are the best aspects of different programs into their own unique classroom efforts.

Judged solely on a basis of objective evaluation, it is impossible to say which group has the best approach, for in the fledgling field of drug education little objective evaluation exists to prove anything.

Shotgunners

There are few who would assert that the Shotgunners have found a panacea. Some administrators think they get along fine by injecting attacks on drugs whenever possible. A seminar here, a few new library books there, an assembly now and then, and plenty of exaddicts on call to classroom teachers constitute what administrators proudly call a drug education program.

It is doubtful that those administrators have had an opportunity to sit down and have a frank discussion with those most immediately threatened by dangerous drugs, the junior high schoolers fast growing into the drug initiation age. If they did, they would find their students woefully unprepared to meet the challenge. It is a frightening thing to talk with a 14-year-old who has been told by persons he distrusts that heroin is evil, but has little idea what he personally would do if confronted by peer pressure to try it, just once. But, multiplied many times, that is exactly what happened in this Shotgunned school district. Students could parrot, with some confusion, the warnings dished out in health classes and assemblies, but had developed few decisionmaking skills that would enable them to deal effectively with pressure to take drugs.

Comprehensive Pharmacologists

In other cities, pharmacology mixed with plenty of Puritan ethics is the staple of the drug education program. By buying up commercial programs and holding mass rallies, educators have gotten across their point: Drugs are bad, debilitating, dangerous, destructive.

Researchers at Pennsylvania State University, on the basis of preliminary studies, found there was reason to suspect that a drug education program based on pharmacology could *en-*

courage the use of drugs. In other words, students could be so stimulated by drug education that they would actually start experimenting. Will students carefully schooled in the appearance, chemical properties, and effects of various drugs actually start a drug problem where none existed before? Some administrators say no, that their program is a sort of preventative medicine.

They may be right, but it is good to keep in mind the potential fallacies and dangers of an informational approach to drug education. First, such an approach presumes that information modifies behavior. There is little evidence to confirm that presumption. What's more, if the information is not factual and complete, it may well lead to drug experimentation. If informational programs are careful to screen the information they offer, they will be at worst simply harmless. But it is easy, and becoming trite, to offer examples of common program materials that flirt with danger in their disregard for balanced presentations. Take, for instance, the plentiful supply of information booklets that offer the observation that marijuana causes hallucinations. What the materials do not point out is that marijuana does not cause anything (except possibly nausea and a bad taste in the mouth) for 50 percent of those who experiment with it, and that an additional 25 percent of its users seldom experience anything other than a mild "high." But then, the materials do not have to say these things. Most of their teenaged readers already have a pretty good idea about what marijuana does. Since the materials are misleading in their treatment of marijuana, it is possible that the students will conclude that they are inaccurate in their descriptions of other drugs.

Values Trainers

An important thing to realize about the Values Trainers is that they were not born that way. In other words, when you find a school district that stresses decisionmaking, humanization, and values training, you have probably found a school district that once Shotgunned or Pharmacologized. Coronado, Calif., is a good example. Like so many other districts, Coronado educators woke up to a drug problem reaching crisis proportions, and rushed madly ahead to do something. They tried a pharmacological approach and found that student drug use seemed to increase, either as a direct result or uncanny coincidence.

Coronado then turned to values education, stressing emotional development, decisionmaking skills, and development of individual attitudes that would enable students to make their own choices when confronted with peer pressures.

The Mixers

Mixers, the drug educators who try to blend various approaches, are also likely to be exadvocates of some more limited approach. If there is a major trend in drug education in this country today, it is away from the informational approach and toward values training, humanization of the schools, and development of decisionmaking skills. There are numerous examples of school districts that have started in a panic, failed with the hard sell or informational approach, and edged on toward the kind of thing that is being done in Coronado. If you catch such a district in transit, you may call it a Mixer.

In suburban St. Louis County, Mo., the wealthy Parkway district started with a program heavy on pharmacology, but began mixing when students and parents reported they were saturated with factual information. Now Parkway is turning to a more balanced approach in an attempt to create a lower profile for its enthusiastic efforts. Parkway, like other Mixers, provides a good example of the evolution of a drug education program. After sending its teachers to a nearby pharmacy school, then feeding drug chemistry to students in massive portions, the district began experimenting with values training and development of decisionmaking skills, and dabbling in efforts to link its program with community rehabilitation centers. Yet the director of the program insists that some pharmacology be retained, reasoning that a good basic knowledge of drug chemistry and effects is necessary for student decisionmaking.

In Miami-dominated Dade County, Fla., administrators have been concerned primarily with meeting minimum State standards by

quickly training their thousands of teachers in drug pharmacology. But even the modest programs of drug educators there have led to a realization that a flow of information from the top will not be enough. The district is turning to value training and humanization of schools, simply because a rational evaluation of their needs as viewed from the middle of a teacher training program led them there.

A teen-teaching program in the Phoenix, Ariz., schools is also leading to more affective education. The zealous proselytizing of teenagers and young adults who go into the grade schools of Maricopa County is, like Dade County, being transformed into a humanization program almost despite itself. Young counselors trained to disseminate technical information on drugs find they are more frequently engaged in discussions of personal problems. As a result, the focus of the entire program is changing to stress warm human relations instead of the latest government report on the control of marijuana.

The Necessity for Planning

Not all of the Mixers and Values Trainers start in a panic and evolve their way to rationality. A precious few school districts have made careful plans for systematic development of programs. Perhaps the best example is in Duluth, Minn., where the local district brought in trainers to conduct sessions for teachers in the RUPS (Research Utilizing Problem Solving) system developed by the Northwest Regional Education Laboratory in Portland. The method stresses cautious definition of problems, extensive fact gathering, and definition of objectives before any program is launched.

Teachers who take the 20-hour RUPS training (which is also available for administrators) tailor programs to meet the needs of their individual classrooms. The projects are then tried out, and are constantly revised in accordance with evaluation standards established earlier. The RUPS method has produced several exemplary classroom efforts in Duluth, and seems to have given a unity of purpose and philosophy to the entire district.

In Wayne County, Mich., a program called DARTE (Drug Abuse Reduction Through Education) is designed to train teams of students, teachers, counselors, and administrators who are able to develop during the DARTE training well thought-out programs for their individual districts. Professionals in the county school district office put the training package together after careful consideration of objectives. As a result, the package has been overwhelmingly popular with the individual school systems that have tried it. The DARTE program stresses values training, empathy training, and decision-making skill development. In other words, it started with what many other programs take years to get around to.

In Seymour, Conn., administrators turned the job of planning over to students themselves. Working with an adult trained in group dynamics, the students were able to conduct a survey in the local high school and design a program to meet the needs indicated in the survey response. The plan they developed, calling for small group sessions in the high school staffed with sensitivity-trained teachers, was a good one. Unfortunately, the administration, arguing that finances were short, did not give the plan its full support. Perhaps if a more extensive planning effort had been made, involving administrators and teachers as well as students, the program would have been given the support it deserved.

There is little doubt that a great many drug education efforts across the Nation would have been saved much time, trouble, and failure if they had begun with the extensive examination of five simple questions: (1) What exactly is the nature and extent of our drug problem? (2) How does the current state of affairs differ from an optimal situation? (3) What goals and objectives are desirable in defining that optimal situation? (4) What are the various alternatives open to us and which of them will we choose? and (5) How do we conduct an evaluation to determine if we are meeting our objectives?

The last question may be the most difficult to answer; no outstanding instruments have surfaced in the field. While it is a simple matter to determine whether students can regurgitate information, the realization that information alone does not change behavior will make things more difficult for the district wishing to measure the effectiveness of affective programs.

Community and Commercial Programs

There are those who offer persuasive arguments that schools should not take on the responsibility for drug education by themselves. George Dimas, executive director of the Alcohol and Drug Section of the Mental Health Division of the State of Oregon, says schools are not really able to handle their old problems, let alone the new and complex issue of drug education. He suggests instead a system in which a State agency delivers drug education services to local school districts. In such a system, the schools become part of a communitywide effort coordinated by a field representative of the State agency. Such a program is now working reasonably well in Oregon, where it is hampered only by a lack of adequate funding.

In some States, school districts have rushed out and bought commercially developed programs, and considered their drug problems dealt with. They are fast learning that drug education is not something that can be purchased. In delightful contrast to the districts that have tried to buy their way out is the active community-oriented program, where the school district joined with groups representing broad cross sections of the town population to request a government grant to deal with drug abuse problems. This is not to say that there is no value in commercial programs. But there is precedent to indicate that they should be approached with caution, used only as supplements, and subjected to the same evaluation and scrutiny as any other element of a drug education program.

The Larger Effect

From Monroe to Coronado, drug education programs universally appear to be having a larger effect on the overall structure and philosophy of schools than on the actual attitudes of students toward drugs. Some call it humanization, others say their schools are "opening up," and still others label the effect "a rethinking about the entire purpose of schools." It seems that, when a district starts out to teach about drugs, it soon discovers that such an effort alone will not discourage drug use. Eventually there is a turning inward, a look at what the school is doing to help develop the kind of person who does not need harmful drugs. In Seymour, teachers started talking about the "need to see students as human beings, as individuals." Other programs, such as DARTE in Wayne County, have taken up sensitivity training as a method to make teachers more aware of student needs. In Milwaukee, rap centers are being set up in high schools to allow students, teachers, and administrators to communicate openly. Administrators in Duluth say they see a repressive school system as a contributing factor to drug abuse, and insist they will do something about it. It is entirely possible that school historians, looking back from a perspective of a decade or two, will recognize the movement to drug education of the late 1960's and early 70's as the major factor in humanizing and altering the direction of American education.

In summation, what can be said about the state of the art of drug education?

- There appear to be four major groups of drug educators: the *Shotgunners*, the *Comprehensive Pharmacologists*, the *Values Trainers*, and the *Mixers*. The latter two groups appear to be far ahead of the former in effectiveness.
- But such a statement cannot be made with certainty because meaningful instruments for evaluation have not yet surfaced in the field.
- Drug education programs often start with two strikes against them because they are hastily conceived as a result of panic and pressure, rather than carefully planned and systematically executed.
- Drug education is humanizing the Nation's schools, forcing administrators and teachers to reevaluate nearly everything they are doing.
- Commercial programs alone will accomplish little. If they are used at all, they should be used as a part of a comprehensive, locally developed project.

Guide for the Drug Education Planner

Introduction

The term "the drug problem" is one of those ill-defined, over-used umbrella terms that means different things to different people. For this reason, it warrants some clarification for the context of this report. One definition involves simply a head count of users, abusers, and would-be users and abusers of drugs and the concomitant, social, medical, and psychological, and educational services required to deal with them. The tendency is to treat *drugs* and their use and abuse as a social ill. The other view of the problem is to treat the use of drugs as a symptom of more deep-rooted social and psychological problems and conditions, such as alienation or anomie. The problem, is not so much drugs per se, but the social and psychological conditions that breed drug use. The tendency here is to label those conditions as problematic and attempt to treat them as the illness rather than drugs.

For the remainder of this report, the term "drug problem" will be used to refer to the latter point of view.

Where Are You?—Analyzing the Problem

Before anything can be done, it is imperative that one have a better understanding of what the "drug problem" is all about. For the educator, it is somewhat academic to talk about an overall national drug problem; it seems far more pragmatic to find out what the problem is in the local community, specifically in the schoolage population, so that educational efforts may be properly targeted. The reason for this provincial emphasis is that the problem takes on a different configuration from neighborhood to neighborhood, city to city, and region to region. It is naive to think that it's the same problem in Watts and Bel Air, New York City and Shreveport, or the urban Midwest and rural Appalachia. Size of the community, philosophical and political orientation, ethnic mix of the population, economic level, social conditions and more all enter in to shape a community with its unique problems. A critical look at the local community to find out about the problem is essential. It is more time-consuming than relying on one's subjective judgments. However, by taking the time and committing some resources to investigate the problem, the risk of wasting valuable resources on pseudo-problems is reduced.

In analyzing the problem, one should tap various sources of information. They include educators, police departments, the district attorney's office, hospital and medical officials, community leaders, the social welfare agency, the local recreation agency, the juvenile authorities, parents and, of course, the students themselves. Often schools may conduct an information search which is limited to only one source of information, e.g., a student survey. The problem with relying on a single source of information is that only one perspective of the problem can be obtained. Every agency and institution can provide records that may prove helpful. The police department keeps records on drug-related arrests for schoolage children, the district attorney's office can produce records on conviction rates, and the schools keep extensive pupil services records on absenteeism, truancy, and disciplinary actions. In addition, there are more personal ways to obtain information about the problem. Interviews with community leaders, students, parents, teachers, and administrators on an informal basis may be quite valuable. The additional cost and time needed to call the police chief or talk to the parents and street leaders may supply valuable insights which a simple survey will never reveal. That investment of time and efforts may yield returns many times over.

It is important to get the right kind of information. Obviously, some basic facts are needed, namely: What percentage of students is experimenting with drugs? What percentage uses them frequently? What drugs are being used? What are some identifiable group characteristics among the experimenters and frequent users of drugs? What are some identifiable characteristics among nonusers? At what age do students begin experimenting with drugs? What do they know about drugs and their effects? . . . and so on.

It is equally important, if not more so, to get some answers to why? Ask such questions, for example, as: What are students' attitudes about

various drugs? What are the factors that influence students to experiment with exotic drugs? What are the factors that influence them *not* to experiment with drugs? How do students feel about themselves, about their parents and teachers? What do teachers, counselors, and school administrators know and feel about drugs? Whom, if anyone, do the students bring their problems to? Where do the students get their information about drugs?

Although it is good practice to invest some time and effort in collecting information as a basis for analyzing the problem, there is a point of diminishing returns. It's impractical to support a comprehensive search effort that will require a large proportion of the total available resources, leaving little or nothing to support a program. It should be remembered that the main reasons for collecting information about the problem are:

- To determine if the problem is a valid one, that is, whether there is indeed a problem requiring properly channeled resources.
- To determine the direction which an education program can take to alleviate the problem, once it's defined.

Where Do You Want To Be?—Setting Goals and Objectives

The drug problems in the local community is probably multifaceted, with concerns related to: (1) preventing nonusers and experimenters from becoming frequent drug users, (2) providing temporary assistance for users, e.g., hotline services, crash pads, and (3) treating and rehabilitating heavy users of drugs, e.g., detoxification, therapy, halfway houses. Confronting the total problem requires concerted efforts from a number of community agencies, such as law enforcement agencies, education, industry, business, parent and community groups, and members of the medical profession. It is imperative for the schools as a public institution to cooperate with the other agencies in the community. However, it is equally important for schools to set some boundaries for what they can accomplish within the total picture. It seems logical to assume that the schools are best equipped to take on that share of the responsibility related to prevention and consider it as their primary mission. It should be done with the realization that education alone cannot solve the drug problem.

What then ought to be the goals and objectives of a drug education program? There are no simple lists of objectives which can be adopted wholesale by everyone, nor should there be. Since problems vary from community to community, the objectives for drug education programs should also vary. The examination of specific local problems ought to help in determining goals and objectives for specific communities. Part of the problem might lie, for instance, in the lack of knowledge about drugs and their effects on the part of students, parents, or teachers. If so, the educational program ought to include a component to provide that knowledge. If after examining the problem it is realized that students use certain mind-altering drugs for the immediate pleasure of a "high," energies might be directed to providing alternatives, for example, how to achieve natural highs without the use of harmful drugs. If students are dropping out of school to turn to drugs because schools are archaic and irrelevant, perhaps a reexamination of what goes on in school is needed in order to provide a more relevant education. The goals of a drug education program may thus be expanded to encompass concerns related to the whole educational system.

There are some guidelines which may be helpful. Since the clients of the educational process are the students, goals and objectives of a drug education program, or any other educational effort, ought to be stated in terms of student outcomes, that is, what students know, do, feel, and think. They ought to be relevant to students needs and problems. This concept of relevance to the problem is implied in the section on examining the problem; however, it bears repeating. One of the ways to assure relevance to student needs is to solicit ideals and reactions from students not only at the time the problem is analyzed but also when objectives are being formulated.

Another concern in defining the educational objectives is the question of feasibility, that is, how likely is it that any stated objective be achieved? For example, what about an objective stating that students will abstain from ex-

perimenting with potentially harmful drugs? Drugs have always been a part of the American culture. Most of the drugs taken by adults are potentially harmful—alcohol, diet pills, pep pills, cigarettes, and so on. Realizing the stated objective is probably unfeasible.

Some experts are beginning to voice the opinion that a more feasible objective for a drug education program lies in promoting more responsible *use* of drugs, including certain mind-altering drugs that are now illegal. Numerous objectives that are relevant and feasible may be specified as a result of the goal refining process. More often than not, schools are faced with very limited resources and personnel to achieve all of the objectives at once.

The problem of drug use and abuse should be viewed as a long-term project, and priorities need to be set to delimit what the schools can accomplish in a relatively short period of time, such as a year. Determining what can be accomplished is contingent not only on what aspect of the problem may be the most pressing, but also on what human and material resources the schools can draw upon to implement a successful program.

How Do You Get There?—Planning to Implement the Program

After having outlined a set of objectives for the drug education program, the next task is to determine the learning environment in which these objectives can be attained. Should the program be largely teacher-directed or student-centered? Will the inquiry approach be more successful than a didactic approach? Will small group discussion be more effective than large group instruction? How can the program sustain student interest and motivation? Will extrinsic rewards be more effective than intrinsic motivation? What about psychodrama as a technique? How do you break down the barriers to talking openly about the problem? Is it possible to hold classes some place other than the classroom—the school grounds, the cafeteria, the student lounge, teachers' homes or parents' homes after school, or the neighborhood youth center?

The teaching content (or curriculum) must be determined. Should facts about drugs be taught? Should students learn how to make rational personal decisions? Should students learn to become more aware of their own needs and find ways to meet them in productive ways? Obviously, the selection of content is directly related to the objectives that each school has established. You will undoubtedly want to review the drug education programs from 12 school districts that are described in case study form, which follow. In addition, six commercially available curricular programs are reported separately. These alternatives should be viewed in light of local needs, constraints, and resources, such as cost, personnel requirements, and community acceptance of drug education approaches.

Next, an implementation plan must be drawn up spelling out who is to do what, how, when, under what conditions, and with what available resources. For example, should the drug education course be embedded in the regular curriculum, or should it be a separate course? Who should be assigned the teaching duties? Should the regular classroom teachers share the responsibilities of teaching the course, or should the task be assigned to one teacher? At what grades should the program be implemented? Will training for teachers be needed? If so, who will do the training, how will it be accomplished, and what are the associated costs? Should exaddicts be used as resource persons? If so, how should they be paid, if at all? Are there any State regulations regarding paying noncertified personnel who assume a teaching role? How should the community be alerted to the program? How should the timeline for the program look? How will available resources be allocated? What are the critical tasks from which resources can not be reallocated? Thus far the program exists only in planning documents; however, these documents will help the educational planner to take the next step—that is, executing what has been carefully planned.

How Do You Know You Have Arrived?—Evaluating Program Success

Before implementing the program, considerable thought should be given to how you will proceed to measure program success. A test plan which specifies the objectives of the testing, test sample, procedures, data collecting

instruments, and techniques of analyzing the data for the purposes of interpretion is helpful.

Too often, programs are implemented without clear prior delineation of the concerns of testing, and evaluation becomes a hurry-up affair to justify the existence of the program. It is important to plan evaluation efforts ahead of time to avoid receiving unintelligible data. One of the early tasks is defining some indicators of program success. In other words, what constitutes attainment of program objectives? Indicators should be stated in behavioral terms to facilitate measurement. This is easier said than done, for it may be difficult to obtain consensus on what constitutes success, especially when the objectives deal with affective components of student behavior.

Specifying success indicators should be undertaken immediately after goals and objectives are stated; however, it is discussed here since it is a part of the function of evaluation.

In the minds of many program managers evaluation is a matter of after-the-fact testing only; it is carried out only after the course has been completed. The major problem with this approach is that if the results are unfavorable, you have no opportunity to revise the program, or any of its elements. Instead, evaluate as you go along. Change course, revise elements, adjust to the situation as you find it. If the teaching strategy you have adopted, such as use of lecturers and guest speakers, does not seem to work, revise it, and adopt another one. If teachers are not trained sufficiently to discuss openly the human development aspects of drug use and abuse, do something about that—either intensify teacher training or substitute another training approach. In any case, remedy the situation on the spot. The steps to be taken may be summarized as:

1. Identify indicators for success; in other words, specify student outcomes that represent desired ends.
2. Design testing instruments to obtain data.
3. Collect information on student outcomes and components of the program to see if the program is on course.
4. Interpret the information and diagnose inadequacies.
5. Select and implement an alternative course of action which may be more effective.

The state of the art in drug education is such that there has been little or no comprehensive programmatic evaluation to measure the success of drug education efforts. Evaluation is a relatively simple task if the success of the drug education program depends solely on students' knowledge about drugs. Instruments for measuring knowledge can be easily devised. However, if the program concerns get into more complex cognitive skills, such as applying that knowledge for decisionmaking or if they encompass affective elements, such as developing positive selfimage, measurement of accomplishment is more difficult.

These guidelines for planning, implementing, and evaluating a drug education program together with the following case studies and product reports will provide a better picture of what curriculum programs are available and what other school districts have done in the area of drug education.

Case Studies

The 10 programs reviewed here were selected by a process of elimination based on several rigorous criteria formulated by the staff with the assistance of consultants and drug educators. More than 50 sites were considered, with the first list being compiled from information gathered at conferences and by mail and telephone surveys. Primary sources of information included mail surveys of departments of education in most States, and a mail survey of about 100 education writers on the staffs of daily newspapers and major magazines.

Initial narrowing down of the list was done on a basis of these criteria:

- Is there reason to believe the program has a distinctive or innovative feature?
- Has the program received attention in the press and from educators?
- Is there reason to believe the program has features that, when described in a case study, would benefit other districts or schools in improving or initiating drug education programs?
- Is the program preventative rather than rehabilitative in nature?
- Is the program directly related to a school system?

Candidates surviving the initial criteria application were telephoned, or correspondence was initiated. When possible, the following information was collected on each surviving candidate:

- Length of program operation.
- Prospects of program continuation.
- Description of the approach of the program (values education, teen counselors, curriculum guides, exaddicts, factual, scare, computerized, etc.).
- Geographical location.
- Demographic description of the site. Community involvement in the project.
- Student involvement.
- Success measures including supportive data.
- Amount of attention received and number of requests for information.
- Dates of program operation.

Following the collection of this information, final selection was made using the following guidelines:

- Programs should meet the initial criteria; that is, they should have distinctive or innovative features, offer examples to other districts, have received some recognition, be preventative rather than rehabilitative, and be connected to school districts.
- Programs should be geographically and demographically distributed. They should not be concentrated in any one particular area of the country, and no area should be neglected. Urban and rural and large, small, and medium-sized population areas should be included if possible.
- Programs should represent a variety of approaches to drug education, with emphasis on approaches believed to be most successful or promising.

Using these guidelines, final selection was made by consensus of the staff. Final selections are not viewed by the staff as the 10 "best" programs in the Nation; instead, they are the 10 programs that best suited our particular purposes. Taken as a unit, the 10 case studies should offer a balanced view of drug education as it is practiced in school districts. Some case study sites have been much more successful than others; some offer what the staff believes to be excellent alternatives in the field; others have achieved superiority in only some areas, and have much room for improvement in others. Some have fallen far short of their own goals, and others have goals which need to be altered. The staff believes that all case study sites selected offer instructive and valuable information for other districts.

In addition to compliance with initial and basic criteria, the sites were chosen for the following reasons:

Coronado, Calif.: Example of a program in a small western city which has evolved from a pharmacological approach to a values training program.

State of Oregon Services Program: Example

of State-coordinated efforts to assist school districts in dealing with drug-related problems.

Duluth, Minn.: Example of an effective teacher training program that is highly transportable, in use in a progressive, medjum-sized school district.

Milwaukee, Wis.: Example of a computerized program especially suitable for use with urban students.

Wayne County, Mich.: Example of highly successful training program, unique and transportable. Suitable for large, centralized school districts.

Seymour, Conn.: Example of a student-oriented program emphasizing values development and small group techniques in a small northeastern town.

Dade County, Fla.: Example of evolution of a large-scale teacher training program in a large school district.

Maricopa County, Ariz.: Example of teen counselor-oriented program tempered by humanizing influences.

Parkway, Mo.: Example of evolution of program from factual, pharmacological approach to values training in a suburban setting.

Laredo, Tex.: Example of outstanding curriculum guide and of program adapted to a specific more geographic region.

Case Study

The Coronado Plan
Coronado, Calif.

"I went to the Haight-Ashbury district of San Francisco and passed myself off as a drunken bum. I spent 4 days sleeping in doorways, bumming and talking to people. I got a lot of insight into what some of the thinking was of people who use drugs, and I saw that the guy and gal using drugs weren't doing so to feel better, but using them because drugs had become a way of life, a culture, a way to be. That's when I came back digging into the value thing."

This isn't a long-haired undercover agent for the narcotics bureau speaking, or a newspaper reporter out to get new leads into the drug scene. Dr. Clifford Jordan, superintendent of schools for Coronado, Calif., is relating some of the information-gathering efforts that went into the "value thing," coronado's new educational program aimed at reducing drug use among youth.

The Coronado Plan is a drug program that really isn't. If you ask students there about their school's drug program they will tell you they don't have one. That's the way the program staff wants it. The Coronado Plan is really a self-awareness program that teaches children decisionmaking and problem-solving skills and equips them with information about drugs on the side. This experimental program, in the developmental stage for the last 3 years, and now in use in grades K–12, is designed to develop and strengthen self-concepts and interpersonal relationships so that children can get along well with others and themselves. Once the child discovers why he feels the way he does, the program staff hopes he will be able to make decisions independent of his friends.

This relates to drug education, the developers say, because when children are taught decisionmaking skills, and when they are trained in managing and controlling their own emotions, they are equipped to make their own choices intelligently and to act on their own judgments. When faced with the decision to use or not use drugs, students will then make the decision best for themselves. Coronado educators are betting that their students will decide to reject artificial self-concept stimulators, in other words, will turn their backs on drugs.

Setting of Program

Coronado is an idyllic little community located on a peninsula with San Diego to the east and the Pacific Ocean to the west. Less than 15 miles away is the Mexican border town of Tiajuana. The San Diego Amphibious Base and Air Station are located in Coronado, and the city's permanent citizenry of 17,000 are mostly white commissioned officers and professionals. In Coronado adults as well as children ride bicycles, palm trees adorn almost every lawn, and people are justifiably proud of their clean little city. As Superintendent Jordan puts it, "For people living here, education is a way of life." School bond elections nearly always pass and 11 percent of the 3,200 public school students fall into the "gifted" category, compared to the national norm of 4 percent. High school seniors practically always go on to college, and usually finish. Coronado is a perfect example of the thoroughly modern American town, now menaced by drugs. It is also an example of how an organized school effort can result in a creative approach to solving the drug problem that apparently doesn't turn the kids off in class.

In the Coronado classrooms kids talk about drugs in all their regular subjects. When they read the *Adventures of Huckleberry Finn* they stop when Pap gets drunk and beats Huck. As a class they discuss how alcohol caused Pap to change his personality and discuss other drugs that affect people's behaviors. In a second-grade class when the children discuss the articles in the room's play store, the teacher uses the empty aspirin bottle as a lead-in to a discussion of the proper use of medicines and the dangers involved when they are misused. Parents and educators alike in Coronado are excited about the possibilities of this low-key approach to drug education. Next year they hope to have the program operating in all seven district schools.

Development

Realization of a drug problem came in 1966. That summer the president of the board of education, a physician, told the board that he had treated many local kids for the physical side effects of illegal drugs. Concerned, the board members called in faculty members, who told them they estimated that only about 30–50 high school students out of the total 937 were using drugs. The board also met with law officials, who assured them that on the basis of their arrest records, the police saw no real drug problem in Coronado. Three weeks later, 15 high school pupils were arrested for possessing dangerous drugs. The community was taken by surprise. Dr. Jordan says this incident gave Coronado the "dubious distinction in San Diego County of having the first publicized teenage bust for drug abuse. We knew we had to get busy and do something fast."

At first the schools tried the scientific, pharmaceutical approach to drug education. Consultants were brought in to talk with teachers about what drugs looked like and what effects they had on the human body. Speakers were invited to classrooms to tell students about drugs. Ex-users told students of their particular drug tragedies and the lessons they had learned. School personnel believed that if they gave kids honest, accurate information, drug abuse would be reduced. Results were discouraging. At the same time that the schools were trying to inform students about the dangers of drugs, drug use was climbing.

A senior high school student remembers the early attempts at drug education: "We saw a lot of films 2 years ago and thought they lied about reactions to grass . . . they showed only people sort of freaked out on grass, not the good times. Kids thought that, if they lied about marijuana, they must be lying about the other drugs too. I think the films led to a lot of experimentation among students to find out for themselves what drugs were like." Coronado educators agreed that the drug data "scare tactic" approach was failing and began to reexamine the direction they were taking.

In talking with consultants from the fields of drug education and psychology, it was decided that what was needed was an all-encompassing program that would give students training in decisionmaking and problem-solving skills, help them to understand the effect of their values and emotions on their behavior, and encourage them to view themselves as individuals who could function successfully independent of friends their age. The main assumption underlying this approach was that, if students are helped to understand why they feel the way they do, and are given the skills in making decisions, they will decide for themselves which values and attitudes they will adopt. They will make decisions, such as whether or not to use drugs, based on their own feelings, regardless of what their friends decide.

To test out these ideas, Dr. Jordan applied for and received a grant under title III of the Elementary and Secondary Education Act. Superintendent Jordan's brief sojourn in the Haight-Ashbury district is typical of the extensive planning that went into this project. The program staff felt that before any curriculum could be planned, it would be necessary to make an indepth study of Coronado's teen and subteen culture.

Several techniques were used in this fact-finding process: questionnaires, group and individual interviews, and opinion surveys. One of the questionnaires, the Carney Risk-Taking Attitude Questionnaire, developed by Richard Carney of Eastern Kentucky University, is designed to help identify potential drug abusers before they become actually involved with drugs. The questionnaire, which has been given to all Coronado students in grades 4 through 12, has the students rate certain behaviors, such as driving a car, drinking liquor, or using drugs, in terms of risks and rewards. The presumption of the Carney questionnaire is that those who see little risk and much pleasure in activities that may involve danger may be inclined toward drug experimentation. Another study examined the influence of pharmaceutical advertising among students in grades 5, 7, and 11. Results showed that students fully understand what commercials try to sell and that, of all age groups, the fifth graders tended to believe all advertisements completely truthful. All groups questioned also felt that pharmaceutical advertising seen on television might lead others, especially younger children, to misuse the products advertised. The last major part of the youth survey was a series of

individual and group interviews with approximately 500 junior and senior high school students. Their ideas about drugs, about drug education programs, and about youth problems in general were listened to and recorded.

After careful review of these surveys, the project staff was convinced that their program should not only teach about drugs, but should also help children learn values and equip them with decisionmaking skills. From the studies the staff also concluded that the program should begin in the very lowest grades. As Dr. Jordan put it, "If children are to resist drugs, the education must start in kindergarten if it is going to be at all effective."

Teaching Value Education

The Coronado Plan is largely based on the work of W. Ray Rucker, V. Clyde Arnspiger, and Arthur Brodbeck, coauthors of *Human Values in Education* (1968). Their work is based on Harold Lasswell's value category system. Lasswell has determined that eight universal values are held in any culture: respect, wealth, power, enlightenment (the process of improving one's ability to make intelligent decisions), skill, rectitude (concern for others, responsibility for self), well-being (both physical and mental), and affection. In Coronado classrooms these values are taught in various ways. They are presented to students through classroom readings, discussions, and group activities.

Published textbooks and prints dealing with value education are used in grades K–6. These include: *Moods and Emotions*, published by The Child's World, Inc.;; *The Human Values Series*, published by Steck-Vaughn; and *Developing Understanding of Self and Others (DUSO)*, published by American Guidance Service, Inc. For example, in grades K–1 the study prints from *Moods and Emotions* are used. These prints show children's faces reflecting various feelings such as sadness, happiness, or contentment. Children discuss these feelings, what caused them and how they can be helped, and learn to recognize such feelings both in themselves and in their friends. In grades 2–3 the children are informally introduced to the eight Lasswell value categories, and self-concept is stressed. In grades 4–6 the categories are used at more sophisticated levels. Readings emphasize how one's behavior is determined by what he values and how his behavior affects the way others treat him. Many times a teacher will purposely not finish a story and instead have the students role-play what they think would be a good solution.

In junior high a 2-week unit taught at the beginning of the school year in all social science classes introduces students to the value categories. This course is part of a general "Orientation to Junior High School" which the Coronado schools use to help students adjust to a new school environment and to establish a feeling of self-worth. When the course is over teachers look for opportunities to reinforce the value framework in their own particular curriculum. Generally teachers in history, English, and science have no trouble finding opportunities to discuss values. The senior high program is the same as in junior high. At all grade levels, teachers look for opportunities to discuss drugs. Coronado teachers have recently put together guides of suggestions on doing this for other teachers to use. These guides offer many ideas for incorporating drug education into existing subjects, and supply teachers with references for additional information. When a teacher cannot fully answer many of the students' questions raised in a class, the school nurse is called in to give the correct answers. In Coronado the school nurse is used as a resource person and receives special training in the pharmacology of drugs.

There is no set formula, then, for bringing drug education into the curriculum; teachers examine their curriculum materials and look for obvious places to discuss drugs, but often some newspaper article or some personal incident will spark discussions among the students and open up discussions related to drug use. Through the value-oriented readings and study prints in grades K–6, students learn about the emotions they feel and how to deal with their feelings. In grades 7–12, there is no formal value education, but again teachers are alert to opportunities where a discussion of values and behavior seems appropriate. At all times students and teachers look for indications of what the program developers call "value enhancement" and "value deprivation." For example, the class may decide that a boy who hits his classmate is "deprived" of the value affection

and then discuss ways to help "enhance" these feelings for the boy.

A recognized danger of value education is that teachers will preach or indoctrinate students with their own values and feelings. Teachers are cautioned against this, and are told instead only to provide the settings in which the student can develop his own personal value system. What they don't want is a drug education program, but rather an educational program that will give students straight honest information about drugs whenever the opportunity presents itself. The main emphasis is to provide the kind of atmosphere in school that will help youngsters develop a good strong, realistic self-concept, an acceptance of others, and an acceptance of self-responsibility.

To help the teachers understand student behavior, three tests are administered every year to the elementary school children. The Murphy Inventory of Values, the Seiders-Sanford test, and the "Vidac" test deal with the eight Lasswell categories and help the teachers develop a "value profile" for each student. These profiles enable the teacher to assess the extent to which a student accords values to others and shows the teacher which values the student feels he is deprived of. It is then up to the teacher to find something the student can succeed in.

Parents Learn Too

Parents are encouraged to reinforce their children's value development.To help parents learn what things they can do, the project offers a course, 2 hours every week for 9 weeks, to familiarize parents with some of the techniques used by Coronado teachers and to suggest ways in which the parent can reinforce the program's training in the home. The course is taught by Coronado teachers who have had special training in applying Lasswell's value categories in the classroom. A guide, *A Parent Approach to Valueing Education in the Home,* has been prepared for this adult course. The guide helps explain the program to the parents and gives them suggestions for working with each category.

Replication

After 1 year of planning, the Coronado Plan has been operating in the classrooms for the last 2 years. During 1969–1970, part of the Strand Elementary School and selected high school classes participated. Last year, 1970–71, most classes at Glorietta Elementary School (K–6) used the program. Districtwide implementation is planned for the future. Since Federal funding ended in June 1971, the Coronado school board has voted to support the program with local funds. The $23,000 the board has appropriated for the program is not enough to allow implementation on a districtwide basis; so for the 1971–1972 school year only grade K–2 and 7–8 will be formally using the program. Superintendent Jordan hopes that for the 1972–1973 year the program can be extended to the remaining grades.

In addition to implementing the program in the grades mentioned above, teachers using the program materials will be required to take a course entitled "Teaching Students the Process of Valuing" through the University of California Extension. This is a three-unit course for which the teachers will receive credit; it covers 27 hours of classroom work over a period of 9 weeks. The course is designed to introduce teachers to Lasswell's theory and show them how to apply it in their classrooms.

A grant has been awarded to Coronado from the California State title III office for the purpose of disseminating information to other interested districts in California. This grant permits Coronado to send descriptive awareness brochures about the program to all California County Departments of Education. On the basis of their responses, districts may apply to Coronado for additional assistance in setting up a similar program. Hopefully approximately 5–10 will be selected for concentrated assistance, and training teams from Coronado will visit these districts and conduct the same 27-hour workshop on value education that Coronado teachers receive. Currently the project director is working on securing credit approval of this workshop from all branches of the University of California Extension.

Drug Abuse Cooling Down

During the summer of 1971 the Carney Risk-Taking Attitude Questionnaire data from the 1970–71 school year will be analyzed, and

the findings released in the winter of 1972. A preliminary examination of the data looks encouraging. It appears that Coronado students who have been exposed to the Coronado program report that they are using fewer drugs and are less inclined to engage in "risky" activities. "Drug abuse in our community," Superintendent Jordan says, "has been drastically reduced, although I cannot yet claim that our program has been responsible for it." He is basing this statement on the number of drug arrests that have taken place in the last 3 years. A senior high school student agrees that drug use has cooled down: "I'm not saying it's gone away just everyone's nice and cool about it now . . . before everyone was stupid, bringing drugs to school, talking openly about them. Everyone's gotten smart now."

It appears that Coronado educators and parents are enthusiastic about the Coronado Plan. Several elementary teachers see great potential in the program. They say their students have displayed greater consideration for classmates, organized fewer cliques on the playground, and assumed more responsibility overall.

The true success of Coronado's program will probably not be seen for a few years until the present elementary school children enter junior and senior high school and are exposed to much greater peer pressure to use drugs. At the present time, however, when viewed against other drug education efforts, the Coronado Plan stands out as a promising attempt to get at the cause of drug abuse rather than just eliminate the symptoms.

Spinoff Benefits

The benefits Coronado children are getting from the program will not just be limited to drug education either. Explaining one of the value readers, a first-grade teacher told how the book purposely shows pictures of, and tells stories about, various cultures. She said at first the children reacted to the pictures in a manner typical perhaps of those children who grow up in a relatively isolated white suburban environment. She said that after a short discussion on the value "respect," the class soon better realized that color of one's skin wasn't that important and that what was inside a person was more important. She hopes that, if enough of these types of discussions can take place in the schools, perhaps "maybe in another generation prejudice and ignorance will be eliminated in our society." Another optimistic testimony for the program comes from the mother of an elementary school student. Her family was moving from Coronado and she was concerned about her daughter's missing out on the type of value training that is used in the Coronado Plan. She reported to the school board that, as a result of the program, she was for the first time "seeing my child as a human being."

Case Study

Drug Abuse Educational Program
Seymour, Conn.

How do you find out what kind of drug education program will be effective with students? In Seymour, Connecticut, school officials tried a novel approach. They asked the students. As a result, the Seymour school got sensitivity training for its teachers, amazingly positive results in working with small groups of students, and major frustrations when the drug education program ran up against administrative pressures to conform to budgets and class schedules.

In its 4th year in 1971, the Seymour program had enrolled 400 students in small group sessions at the only district high school. In the small groups, teachers and counselors who had undergone sensitivity and group dynamics training rapped with teenagers about everything from drugs to levitation and the occult. Outside the group sessions, the teachers and counselors rapped with each other about an excessive pupil load and an unencouraging amount of administrative support.

From that vantage point, those connected with the drug education program could count both successes and failures, could look backward to the origin of the program in a small group of hand-picked students, and could look forward in hopes of saving their carefully evolved program from becoming just another place to dump kids who had no other classes to attend.

Development of Program

As is the case in many small towns, the Seymour drug education story began with tragedy. A teenage girl found her way into her mother's medicine cabinet and experimented with pills. A few hours later, she was near death in the hospital intensive care unit. A teenage boy tried glue sniffing, and wound up at a local institution with brain damage. The police reported a flow of hallucinogens into the community. A student was arrested.

Eventually, school administrators and community leaders decided that tragedy was too costly a method of drug education. Something had to be done in the schools.

The discovery of local drug abuse was an especially stark truth for the people of Seymour to accept. Most of the residents had great faith in their young people. The family was the center of community life for the descendants of Slavic and Italian immigrants who populated the picturesque village of 10,000. Overwhelmingly blue collar, the men of Seymour left the town each morning to work in the factories of the beautiful Naugatuck Valley. When they returned to their community, they tried to help make better schools. The people of Seymour supported an ambitious school physical expansion program, and paid some of the highest taxes in the Nation as the result.

Helping Students Become Responsible

Perhaps because of the enduring faith in young people, Seymour decided to tackle the drug problem by turning it over to students. Drawing on the ideas of Chris Argyris as stated in his *Integrating the Individual and the Organization*, Seymour school administrators hypothesized that a reduction in supervision would help students become responsible; that as students assumed greater responsibility for what they were doing, their attitudes would improve and their productivity increase; and that the students stand to learn more if they have a say about what goes on in the classroom.

School officials tagged their set of hypotheses "A nondirective approach to learning," and took the approach to Marlin Dearden, a public health official at Griffin Hospital in nearby Derby, Connecticut. Linking up with Dearden and his Public Health Project, a federally financed effort, the Seymour schools were ready by January 1969 to launch their first drug education efforts.

Because town physicians and school authorities felt they needed more information on the nature and extent of local drug abuse, the first priority for the initial drug education efforts

was to develop and administer a questionnaire to be distributed to the 500 high school students. To select members of the student pilot group, counselors interviewed students representative of various segments of the school population. The 12 students picked represented the sophomore, junior, and senior classes. There were "D" students as well as "A" students, class officers, former school dropouts, and both drug users and nonusers. Members of the group were not close friends, and knew each other only as a result of the inevitable association in such a small school.

The pilot group students were permitted to leave regular classes to attend the weekly 1-hour meetings, which continued for 12 weeks. The sessions were conducted by Dearden, who had training in group dynamics.

In addition to the questionnaire development objective, school officials and Dearden camp with four other goals for the pilot group: (1) through the use of the questionnaire to determine the extent of the drug abuse problem in the school and make recommendations to the school administration, (2) to assist students in the group to discover the basis for their own attitudes about drug abuse, (3) to create an atmosphere among the group members conducive to personal growth and personal competence regarding drugs, and (4) to evaluate student response to the experimental nature of the method of education being used.

Dearden recalls that the first session began with his brief introduction, then fell into an uncomfortable silence until one student blurted out "Some of us use drugs." Another student suggested that all group members write on pieces of paper whether or not they used drugs. Dearden encouraged the students to forget the mechanical task of note passing, and openly discuss their drug use experience. Six of the students then admtited that they had used drugs including marijuana and LSD.

The first sessions were dominated by the drug users, whom Dearden described as "hyperactive." However, as the sessions progressed Dearden said "each student became more aware of himself and how others in the group perceived him; and the entire group took on a cohesiveness and genuineness characterized by caring, supportiveness, and increased interpersonal competence."

Several sessions brought about such an outpouring of those feelings that additional time had to be requested from school administrators, who granted it in every case.

When the group began to examine the reasons for drug use, students at first listed curiosity, social pressure, rebellion against authority, and emotional problems. As the group explored drug use in depth, students abandoned their earlier list and talked of disenchantment, alienation, lack of values, and a sense of futility regarding the basic institutions of society.

One common complaint voiced by group members was that they could not talk openly with their parents about drugs. As one student put it: "You know, I think my parents need the drug education course just as much, if not more, than the kids. Because if I walked up to my parents and said, 'I smoke grass,' there would be shingles flying. And that isn't the answer. Kids need communication, understanding."

Another student said his parents were "shocked" when he told them that it was not difficult to get marijuana and LSD at Seymour High School. "I wish they were more open minded about the subject," he said.

And from another group member: 'I get along fine at school, but when I get home, I zip up a shell around myself because if I even smile, my mother wants to know what I've been up to."

One girl in the group admitted that she began using heroin to make an impact on her parents. She said she had always been expected to live up to their high expectations, and that the situation created too much pressure for her to stand. In the absence of meaningful communication with her parents she said she turned to heroin.

Group members had similar comments about their relationships with teachers. "Teachers seem to be more interested in whether we chew gum, sit in our assigned seat, or have sideburns than they are in relating to us as human beings," one student said.

A third major area of alienation also surfaced. Students had a genuine fear of peer rejection. As members explored their fears of negative reaction from fellow students, they discovered that group members had many positive feelings for each other. It was suggested

that if the students were liked inside the group, then there was reason to believe they were also liked outside the group, and thus had much less to fear. They could feel more comfortable about being themselves. The idea seemed to have great value to the group members.

Dearden reported that one of his biggest problems in conducting the sessions was in holding back the natural urge to make directive comments. Somehow he managed and the sessions continued on for the 12 weeks with students exercising complete freedom to discuss any topic that seemed relevant. Never, Dearden reported, did the discussion "get out of hand, either topically or emotionally."

Finally, after much deliberation and rewriting, the students produced the questionnaire. In its final form, it dealt with more than drug abuse. Pilot group members also wrote in questions seeking information on family makeup, parent relationships, religious activity, school grades, and extracurricular activities. And there were questions aimed at pinpointing reasons behind drug abuse.

Administered in the spring of 1969, the questionnaire revealed that 25 percent of the boys and 15 percent of the girls at Seymour High School had used illegal drugs. In addition, the survey showed that more Seymour students used drugs than drank alcohol, and that those who went to church regularly were less likely to use drugs.

School officials felt that the most useful question in helping them plan future drug education efforts was "What kind of drug education would you prefer?" Fewer than 1 percent of the students said they would prefer parental guidance. Approximately 80 percent said they felt a combination of films and discussion groups with other students and drug users would be most desirable.

The pilot student group did not disband when the questionnaire was completed. Instead, they went on to evaluate the results of the survey and propose guidelines for a drug education program. Their suggestions included (1) 14 hours of instruction using the nondirective approach for all high school students, (2) the use of small discussion groups similar to theirs, (3) a teacher training program, and (4) Creation of a second student committee to study and make recommendations on implementation of the drug education program. The pilot group students also underwent posttesting to determine changes in their attitudes and behavior regarding drug use as a result of the program. Results showed that three of the six drug users in the group had stopped using drugs, and that the other three had reduced their use. None of the nonusers reported trying drugs during the 12 weeks.

The Seymour Board of Education accepted the suggestions of the students for a continuing drug education program (perhaps prompted by the attention given by the local press to the widespread use of drugs reported in the questionnaire results), and appropriated $4,500 for teacher training and the second student group.

Teacher Training

In the fall of 1969 11 Seymour teachers began training under the supervision of Dearden in human relations, group dynamics, nondirective methods, and the pharmacology of drugs. At the same time, a student group similar to the pilot group was selected and began meeting. Students in the second group were selected by the members of the pilot group, who sought to assure that the new group would be just as heterogeneous as theirs had been.

The second group, Dearden recalls, began and proceeded much as their predecessors had. There was the same awkward silence, followed by an opening up, followed by free and wide ranging discussion, and ending in the formation of five specific recommendations for implementing a drug education program. The students suggested:

- A drug education course should be required of all freshmen and sophomores. Since sophomores had exhibited the lowest tendency to use drugs in the previous year's questionnaire, the students concluded that a preventative program at this level would be most effective.
- Enrollment should be limited to 12 in each class, with a teacher-consultant who had completed the teacher training course.
- Student groups should be mixed according to grade level, and both drug users and nonusers should be included in each group.

- Each student group should select its own learning goals and its group task. Suggested tasks included a survey of drug rehabilitation and treatment facilities in the area, development of drug education materials, assessment of community concern, and development of drug education for parents.
- Groups should meet for one class period per week for 12 to 14 weeks.

Meanwhile, the 11 teachers were attending sessions designed to give them empathy and liking for students, to break down the facade of teacher expertise, and to give practical experience in techniques of group dynamics.

In January of 1970 the 11 teachers volunteered to take 12 students each for the first large scale effort in drug education. The resulting classes were called Personal Growth Laboratories, and were in conformity with the suggestions of the first and second student groups.

"It Didn't Work For Me"

It was at this point that the previously successful Seymour program began to run into troubles. Since students were not excused from classes to attend the weekly sessions, they were now reluctant to sign up. Free time, such as the popular "talking study hall" had to be given up to attend the growth labs. Students dropped out of the labs in embarrassingly large numbers. Some teachers found they were not prepared to tackle nondirective learning.

"It just didn't work for me," a young physical education teacher recalled. "I had the same kids for a growth lab 1 hour and for a physical education class the next hour. I was supposed to change instantly from being an authority figure to giving up all my authority and becoming a consultant. It just didn't work."

No systematic evaluation was conducted for the initial growth labs, but teachers did report that positive changes occurred with the students. Dearden, who left the program and Griffin Hospital shortly after growth labs got started on a large scale, observed that "the greater long-term impact of the program will come from changes produced in the teachers and the school system in the direction of more openness in communication than from its direct effect on the students in the drug classes."

Despite the problems and the lack of enthusiastic evaluation, school officials were sufficiently satisfied with the program to designate another teacher as its director, and to finance further training for him. He was to take responsibility for training additional teachers and counselors, conducting staff meetings, and evaluating effectiveness of the program.

Yet, as the program moved through its third year in 1970–1971, major difficulties threatened the future of the efforts. The problems that surfaced included a lack of administrative support in allowing teachers freed time to conduct the labs, increasing pupil load for teachers, continuing student reluctance to sign up and stick with the classes, and little success in getting student groups to design and complete group projects.

A new modular scheduling system had been introduced in the high school, and the students were to be scheduled by modules into the drug labs. But this was found to be impossible, and so the difficult problem of fitting trained teachers' schedules to the schedules of those students willing to commit themselves to membership in the groups was faced. The teachers tried to get students to sign up by making appeals in all-school assemblies but finally had to recruit individually for their classes.

Further, there was no allowance in the school district budget for teachers to receive followup advice from the trainers who instituted the program. The nonexistent budget for the program also sparked a long running feud between teachers and administrators. Administrators offered extra pay for the extra duties, but teachers turned down the pay, insisting that the growth labs be considered a part of their regular classload.

By the end of the school year, the program had evaporated so much that only three counselors and two teachers were conducting seven spottily attended groups. Indeed, the program might have folded completely at the end of the year had it not been for the need of the administration to schedule the increasing number of students into classes. During the first 3 years of the program, due largely to an influx of tuition students from a neighboring town and to

the switch of freshmen from the junior to the senior high, the school had grown in enrollment from 500 to 1,200. The growth labs looked like a good place to put nearly 400 sophomores during one module that otherwise could not have been easily filled.

Yet, administrators still declined to consider the growth labs as a part of the teacher load, and the scheduled time allotment for the labs was cut to 30 minutes, once a week.

Reactions to Program

The director and the other teachers and counselors do not, however, have totally negative reactions to the way things are going. They describe with pride the way the sessions are conducted: the decisionmaking exercises, the fishbowl discussion techniques during which students watch selected members of their group as they attempt to communicate, the blindfold "trust tests" during which students learn to rely on their peers to guide them about the room. Eventually, the group consultants report, they experience the same openness, enthusiasm, and willingness to get down to the root causes of drug abuse that marked the success of the pilot groups.

The teachers and counselors also report that the program has had a positive effect on the entire school. They say that effect is perhaps more important than the drug education aspects of the labs themselves. Faculty members who have come in contact with the program are more open to new ideas and tend to relate to students more effectively than in the past. One teacher commented after completing the group dynamics training that she could "never face a class again without realizing that I am facing a group of people and not robots."

As for the administration, they are proud of the program and defend their efforts to support it. Evening training sessions have been held for parents, a community advisory board has been formed, and the central office is now working with community leaders to set up an auxiliary program that would give students an opportunity to talk about drugs and related problems with adults who are not their own parents. The nondirective approach is supported by trying to counter any movement to introduce a scare approach; the local police have been kept away from the schools by the director's assuming personal responsibility for handling students who possess illegal drugs. "Except in cases of flagrant law violations," he says, "the names of teenage drug abusers known to school officials are kept confidential."

But the most important indicator of administration support for the drug education program is the effort currently being made to obtain a grant from the State Department of Education which would provide the program with the necessary monetary assistance it needs.

As the administrator reads current public sentiment, the people of Seymour are not now willing to see more of their tax dollars go to support the small group approach. To fill the resulting financial gap, the district is actively seeking the State funds.

Case Study

CODAC's Teen Involvement Program
Maricopa County, Ariz.

When Jackie, a high school senior, walks into a certain fifth-grade classroom in Phoenix, smiles appear on the children's faces. Once a month Jackie comes to the class to talk about drugs—why she doesn't use them and what medical and legal facts she thinks younger persons should know. She covers much more than pharmacology. The conversation will switch to typical problems such as not doing well in school, the pressure to conform, wanting to make the football team, or not being pretty enough. When this happens Jackie switches roles. Instead of someone with facts, she becomes a counselor, a big sister, a friend. She knows that, when these students discuss what's on their minds, she's helping them to understand why some people turn to drugs in the first place.

Jackie is one of 800 Teen Involvement counselors reaching approximately 10,000 elementary students in Maricopa County. As part of the Teen Involvement program, these high school students, alone or in groups of two, go into fifth- through eighth-grade classes once a month and relate current information on drug abuse. Selected by their individual high schools, they receive training in drug education and communication-interaction skills at bimonthly sessions with Teen Involvement coordinators. Once in the classroom they are on their own to help younger students realize the dangers of drug use. Usually they do much more.

Originally DOPE STOP

Started in 1969, Teen Involvement was known as Dope Stop until September 1971. Dope Stop was originally a project of the Maricopa Mental Health Association, but in May 1970 it became the preventive education program of CODAC, the Community Organization for Drug Abuse Control. CODAC, formed in 1969 after narcotics arrests in the Phoenix area had more than doubled, concentrates on three main areas: education and prevention, treatment and rehabilitation, and training and research. All organizations in the area concerned with curbing drug abuse are invited to join in an attempt to avoid overlap and duplication of services. As of 1972 the potpourri of CODAC agencies included groups from the Salvation Army to the Phoenix Junior League.

Before Dope Stop joined CODAC the program consisted of an attempt to catch the pushers and not much more. Ads were placed in local newspapers asking students to turn in the names of drug sellers. Required to give their names, most of the teenagers felt like junior narcs. Therefore, this idea never worked. The Dope Stop staff quickly realized they needed a more positive aspect of drug prevention and decided upon the idea of teen counselors.

Getting Into The Schools

Trying to convince high school principals to allow teenagers to go into the elementary grades and teach about drugs was no easy task. There were numerous problems to worry about —counselors using drugs but professing to be clean, parental concern, and most of all, teachers who feel threatened. During the first year of operation, 1970–71, it was Norman Hovda's job and headache to set up the program and gain acceptance in the county schools.

Hovda, 25, came to Teen Involvement well experienced in drug abuse. After using drugs of all kinds for almost 3½ years, he ended up in Maricopa County General Hospital confused and searching. He had had a flashback of an LSD experience and was considering suicide. Friends and religion pulled him out; since that time he's been "ready to communicate with other kids about why I ended my drug career."

Hovda went to high school principals and presented the Teen Involvement concept. Skeptical principals thought of many reasons to say "no." Besides the problems of doubting parents and reluctant teachers, there were scheduling problems and transportation problems—how would the counselors get to their schools and which classes would they miss?

Hovda provided answers. If his enthusiasm for the program won out, he was given the go ahead, and the next step was enlisting students volunteers.

This was usually done by arranging an optional assembly. Flyers would tell high school students about the program and invite them to come hear Hovda speak. These assemblies always proved successful, and usually there were many more interested students than were needed. At one assembly 400 teenagers showed up, 170 signed up to be volunteers, and only 100 could be chosen. A faculty adviser, appointed by the principal, directs the selection process which may differ from school to school, depending on individual policies.

Basically what they'd like to see in all of their counselors is a willingness to learn pharmacology, a commitment to the program, and most of all, sympathetic and open ears for listening. These attributes shouldn't just apply to the athletes, cheerleaders, and student leaders; the teen coordinators urge faculty advisers to choose from among all kinds of students. If volunteers have used drugs and stopped, the advisers must decide if they can join the program. Hovda thinks they should: "Our official stance here is that everyone has something to offer in the classroom; if they've used drugs fine." The Teen Involvement staff did recommend, however, that freshmen not be used because they are too close in age to those pupils they'd be working with.

Once the counselors have been selected, the elementary classrooms must be found. Usually the faculty advisers first secure approval from the grade school superintendent and then go to the principals of those grade schools that feed into their high schools. When the elementary principals agree, the idea goes to the elementary teachers. An attempt is made to persuade teachers that the counselors are "tools" to help them, not replacements. Often this is difficult because many teachers in the elementary grades do not agree with Teen Involvement that drug education should begin at that level. Many elementary teachers will not admit they have a problem with drugs in their classes. Maricopa County schools have required drug programs, but some teachers are uncomfortable teaching the subject and benefit from the Teen Involvement program. Teachers remain in their classes when the counselors come, and the counselors are constantly encouraged to keep the teacher informed about what they plan to do.

Counselor Training

When the administrative hurdles have been crossed, the volunteer counselors are ready for training, which occurs three times a month in three different ways: (1) weekly meetings where counselors meet as a club and work out their own programs, (2) bimonthly meetings with Teen Involvement coordinators, and (3) monthly group sessions with representative counselors from all high schools.

At weekly meetings the agenda is left up to the counselors. Usually they go over problems, suggest new activities, and plan for their next class visit.

At the bimonthly sessions with the coordinators, the counselors learn about different drugs and are introduced to "teen involvement activities"—exercises designed to get the students talking and interested. Usually the "hard sell" portion of the counselor's visit is devoted to one specific drug or issue. For example, the suggested schedule for class visits recommends six sessions for covering the following six areas: sniffing, legal aspects of drug abuse, marijuana, amphetamines, hallucinogens, and barbiturates and narcotics. At these sessions counselors receive information about these drugs, view films on each, and learn about the activities and problems of other counselors. Questions are answered; and pamphlets, reprints, and brochures are handed out for reference. Suggestions for fake drug displays are provided; in one, counselors are told they can use oregano, paprika, and garlic salt to simulate marijuana.

The monthly group sessions are optional since they are held on Saturday mornings. Each high school is asked to send two or three counselors to the meetings which usually last 3 or 4 hours. Usually local experts in the field of drug abuse and counseling speak and a general rap session follows.

Three monthly newsletters—different editions for counselors, faculty advisers, and grade school principals—help keep communi-

cation lines open between the groups. These bulletins cover problems, achievements, and future expectations. Everyone is asked to contribute so that others can learn from past experiences.

Involvement-Interaction Activities

As the 1971–72 school year began, the emphasis at Teen Involvement was switching from straight factual information to more involvement-interaction activities. At first there were testimonials, "Why I don't dope; what I do." When it was realized that this approach wasn't really lasting because every kid was different, a switch was made to a study of student attitudes, values, and what makes people take drugs. Although Teen Involvement's main concern is with supplying elementary students with the facts about drug abuse, the information presented must be both entertaining and factual if students are to be reached.

The Teen coordinators think up interesting ways to present drug education. Many of their ideas emphasize role playing and pantomimes, skits about family arguments, "letting off steam," and something called Form a Story in which the counselor starts a story about drugs and passes it on to the students, having one student at a time continue it. These exercises start the students talking.

New Directions

At the start of 1972, the staff of Teen Involvement was busy devising new activities for counselors and new ways to introduce the program into the more than 268 public and parochial schools in Maricopa County. To help explain the program to principals and teachers it developed a 2-hour program that includes a slide presentation on Teen Involvement activities. In it, the staff tried to cover all potential trouble areas clearly so that school personnel know exactly what they're getting. It also put together a slide presentation for use at the student enlistment assemblies. This presentation shows prospective counselors examples of communication activities and describes what they'll be doing in the classroom.

A Teen Involvement week was scheduled to give recognition to the more than 800 counselors in the program and to show community appreciation. Special events were planned: free pro basketball games, certificates from the Governor of Arizona and the Mayor of Phoenix, and even a local restaurant supplied 1,000 free hamburgers.

At two Phoenix high schools, counselors receive credit for participation in the Teen Involvement program. The staff is working on this for all schools in order to make the program a part of Phoenix's overall drug abuse prevention plan.

Teen Involvement has a second and smaller program, the Speakers' Bureau. This Speakers' Bureau includes the Teen Involvement staff plus qualified experts in the drug abuse field who are willing to speak to community groups. At least once a week, and usually more often, someone from the bureau talks to groups such as the P-T-A, churches, Cub Scouts, and Optimist Clubs.

Program Growth

As of February 1972 the program was in 30 high schools, 62 elementary schools, and reaching 10,000 students in grades 5–8 each month. The staff hopes eventually to reach all 268 parochial and public schools in Maricopa County and get the program into the third and fourth grades.

Programs similar to Teen Involvement are also operating in schools in Louisiana, Illinois, and Colorado.

Case Study

Duluth Drug Education Program
Duluth, Minn.

In Duluth, they're teaching drug education in typing classes, home economics, physical education, and just about every other course. Only they don't always call it drug education, and the students don't always know that that's what they're getting.

Duluth is a city known for its innovative public schools. Its people, steeped in Minnesota populism and progressivism, are among the biggest education boosters in the Nation. These are undoubtedly some of the factors behind the district's rational and sweeping approach to drug education.

Drug education pops up in Duluth schools in unlikely places and subtle ways. That's the way the teachers and administrators want it. They say they have rejected the scare approach, have decided against a "trickle down" method of handling the touchy subject, and have set their sights on nothing short of a program that will change the entire form and direction of their public schools.

Educators in Duluth say that drugs are not the problem, but the symptom of the problem. Although this saying is common in drug education circles, in Duluth it seems to have extra meaning.

"We are in the process," says the assistant superintendent, "of changing from a closed to an open system. We intend to start dialog, initiate reform, and institutionalize change. That is the only meaningful way to combat drug abuse among students. We have seen overwhelming evidence that piecemeal programs and the hard sell, scare approach just don't work."

Teacher-Initiated

But the movement to turn the education program around in Duluth came originally not from administrators, but from teachers. It was in the spring of 1969 that a group of teachers decided that teachers needed to move into the forefront of educational change, and needed better inservice training to accomplish that goal.

A proposal for improved inservice training stressing programs created or selected by teachers themselves was drafted. Through bargaining sessions with the administration, the inservice program was included in the teachers' contract package, along with salary boosts and working conditions.

To kick off the new inservice program, the teachers decided to adopt the Research Utilizing Problem Solving (RUPS) methods developed by the Northwest Regional Educational Laboratory in Portland. After hiring a RUPS trainer for Duluth, teachers in a districtwide election chose 12 representatives to receive the initial training. The multiplier effect was then used to deliver the RUPS training to 750 of the district's 1,000 teachers, and the RUPS package was adapted to become a program specifically aimed at creating solutions to drug problems.

The RUPS program consists of 20 hours of instruction introducing step-by-step procedures for identifying and solving problems. During training sessions, teachers learn to gather and use data, develop alternatives for action, and plan for the introduction of change. The emphasis is on an individual approach, tailored to meet the specific needs of teachers in their unique situations.

Working in small groups, teachers learn specific skills, such as the Field Force Technique of Diagnosing a Problem. This technique works on the assumption that it is unwise to jump from a problem to a plan of action. Instead, there should be careful sequential progress, following a prescribed series of steps. If a patient went to a doctor with a headache, the RUPS materials argue, and asked if he should undergo brain surgery, the doctor would neither agree nor disagree, but would instead conduct a careful diagnostic examination before deciding on a course of action. By the same token, the materials point out, it is not advisable to go from the observation that a child is creating disturbances in class to the immediate assumption that the child should be kicked out of class. By following the same

logic, teachers learn that it is not acceptable to go from the suspicion of a drug problem to the assumption that students should be scared into keeping away from using drugs.

Following the Field Force Technique, the teachers first learn to correctly identify the problem, to diagnose the problem situation, and then to consider action alternatives, try out an action plan, and finally to alter the action plan by continuing evaluation.

In keeping with the RUPS philosophy of following carefully prescribed steps in implementing programs, the Duluth trainees decided to experiment with 30 students in a summer session before trying out their individually developed RUPS action plans. Meanwhile, the teacher training efforts had picked up support in the form of a grant under the Elementary and Secondary Education Act, title III. The scope of the grant was much broader than drug education, covering a complete program tagged Human Relations Training. But Duluth educators saw the grant as entirely pertinent to drug education, since it provided for expansion of creative projects within the district.

Spin-off Programs

When feedback from the experiment with the 30 summer students was favorable, teachers began introducing the RUPS programs into their classrooms. Among the more ambitious projects to grow out of the training sessions was the Adviser-Advisee Program for Central High School. Concluding that students often have no adults with whom they can talk, teachers at Central evolved a program of assigning each student to an adviser—a faculty member of his or her own choosing. Students then spend time individually or in small group sessions talking with the adviser. Each teacher at Central advises about 20 students. Orientation programs are held for parents so that they can get to know their child's adviser and learn how they can help to accomplish the program's goals.

The teachers who developed the adviser-advisee system listed six specific benefits:

1. The system will humanize the school, substituting a warm, personal relationship between a student and an adult for the usual formal relationship.
2. The system will prevent problems by providing an adult with whom the student may talk before the problem reaches a crisis stage. The developers point out that most student-adult contact in schools usually results after a problem has reached crisis proportions, and has been called to the attention of the administration.
3. The system will help prevent confusion by providing a source of direction to students who are often confused and intimidated during the first days of high school.
4. The system will provide a method for dealing with independent study time since the adviser will be able to offer guidance for use of this time.
5. The system will help prevent destructive behavior such as truancy, drug abuse, and running away from home. The adviser, it is hoped, will be able to help students channel their energy into positive and creative forms of behavior.
6. Finally, the system will provide an effective method for program planning, since the adviser will be able to act much as a college adviser in assisting a student to plan a course study.

Evaluating the adviser-advisee program after its first semester, the director says it has been so successful that it will soon be adopted in other district schools.

At Rockbridge School, teachers developed a program called Self-Concept and Positive Experience. Representative of a number of projects developed by RUPS-trained Duluth teachers, the major focus here is on dealing successfully with life problems. Teachers working with fifth and sixth graders use open-ended questioning, brainstorming, and small group techniques to encourage students to express ideas, opinions, and beliefs without fear of being judged right or wrong. Decisionmaking skills are also stressed as students practice considering information, alternatives, and consequences before they make up their minds. In a typical activity, children in a class are divided into five groups. Each group considers the question, "What would you like to know about drugs?" One student in each group is selected to write down the responses. The lists developed are then

read to the entire class, and the teacher responds by stating that most questions will be answered during a study of drugs. Open-ended questions relating to attitudes toward drug use are then asked, and students individually record their completions. Later they are encouraged to read their responses to the class.

For younger students, teachers at Bryant School developed a program which stressed identifying and recognizing feelings. First and second graders view pictures of people expressing various feelings, and are then encouraged to identify and discuss those feelings.

A kindergarten teacher has developed a program designed to throw out the success-failure concept central to the philosophy of most schools. Instead of rewarding and discouraging children, the project stresses continued reinforcement for all and a frank examination in class of the problems caused by success-failure attitudes. In one activity, students discuss loneliness, viewing pictures of lonely persons and listening to a story about a lonely boy named Lonnie. The discussion then turns to friendship, with emphasis on partnership and doing things together. Three-member groups are formed; the members sit together at snack time and work together on projects such as drawing pictures of members of their group.

An eighth-grade home economics teacher developed a project, called Living Happily with Family and Friends, to deal with the stresses of puberty and to help girls realize that their feelings are perfectly normal. Vignettes featuring teenagers with problems are a central focus of the project. Should a girl call a boy? Should a girl take a job in a filling station and risk being considered unfeminine? Various alternatives and ways of approaching the problems are presented for class discussion and individual response.

The typing teacher developed a program that substitutes exercises in developing a positive self concept for the usual bland typing material. While the students are developing typing skills, they are also developing a feeling of self worth.

Teachers have also prepared programs for use outside the usual classroom setting. One project is for educable mentally retarded children. Through brainstorming sessions, visits to juvenile court, and discussions with doctors and pharmacists, the program supplies EMR children with strong retorts to peers who suggest that they use dangerous drugs.

Other projects involve parents in committee work and seek to train adults to deal effectively and sensitively with their children's drug problems. Still other RUPS-inspired projects have been developed by teachers for other teachers.

Duluth teachers and administrators constantly refine their drug education program. So far, a drug education resource teacher has been designated at each district school. The resource teacher is responsible for maintaining a library that is likely to include not only books on pharmacology and psychology, but also titles such as *The Greening of America* and *Future Shock*. The district is also developing a clearinghouse for exemplary programs, plans, and ideas in the drug education field, and is working with the PTA to encourage supportive projects.

Evaluation

So far, evaluation of the program has been positive. An independent agency, Educational Management Services of Minneapolis, has issued a preliminary report favorable to the philosophy and methods of the RUPS-centered approach. But the district will not be satisfied with anything less than a total reformation in the school system. After the reformation, Duluth teachers and administrators say they envision a school system where everyone succeeds, teachers and students meet often on common ground, parents work closely with their children and their children's teachers, and a spirit of community and humanity pervades. That, they admit in Duluth, may take awhile; but then they see such reformation as the only reasonable, viable solution to the drug problem.

Case Study

Drug Abuse Reduction Through Education (DARTE) Wayne County, Mich.

In Wayne County, Michigan, an industrial area known for its automobile production, schools are setting up classes in yoga and meditation, teachers are signing up for empathy training, and students are being called into planning sessions to share in decision making on a nearly equal basis with administrators. It's happening all across the county, where the population exceeds that of several States.

The catalyst for change is DARTE, which once stood for Drug Abuse Reduction Through Education but now, more than a year after its inception, stands for much more. To students, teachers, and administrators in the greater Detroit area, DARTE now means something almost intangible that has happened to their school systems.

On paper, DARTE is a two-member professional staff that sets up drug education training sessions for county school district teachers, administrators, and students. But, as anyone involved will tell you, DARTE is not something that can be put on paper. "It's a process, not a package," explains the project director, "and the key to the process, is to get groups from local districts to take a fresh look at their own unique problems, then develop programs tailored to individual needs."

The process works this way: Local districts, working with a DARTE consultant, select a team of students, teachers, counselors, and administrators who will attend a training session conducted by the DARTE staff and outside consultants. The sessions vary in length of time spent in instruction from 24 to 36 hours, and are held over 5-day to 10-week periods. Occasionally, shorter conferences are held.

During the sessions teams receive value clarification training—a mild form of sensitivity training and the expected lectures on drug pharmacology and law and public policy on drug abuse; and participate in yoga, meditation, and role playing games. A crucial part of the initial training involves team action planning, whereby each team must come up with a plan for changing their home district to make it a place less likely to incubate teenage drug abuse. The team must state goals, present programs and alternatives, and finally present a proposal to a mock school board.

But the real proof of DARTE effectiveness comes when the team returns to its district and makes a presentation to a real school board. As of fall 1971, with the DARTE program barely a year old, nearly 1,000 graduates of various DARTE sessions had taken programs back to a score of Wayne County districts.

The team programs range from setting up committees, to restructuring the curriculum, to generating extensive support from students and parents, to establishing mini-DARTE training programs. Curriculum guides have been producted in underfinanced school districts where such an undertaking might have been revolutionary before DARTE. In the Detroit suburb of Northville, a DARTE-trained team set up a community steering committee to design a drug education program for the high school stressing human relations, personal values, and self concept, and went on to bridge the summer with a "Jobs for Kids" program designed to fill idle hours with meaningful activity instead of drug abuse.

Dearborn, also produced a DARTE team dedicated to providing empathy training for teachers, young people, and adult volunteers, going on the theory that drug abuse is being combated when people really listen to others' problems and develop skills in interpersonal relations.

The Dearborn team also produced a proposal which calls for funding of training in values clarification. It is hoped that improved teacher skills in influencing values and strengthening independence of thinking among students will result in classrooms where teachers do not preach, and in schools that students consider relevant to their needs.

Creating student-centered schools is apparently what the DARTE program is all about. Despite the training in drug laws and pharmacology, the true heart of the DARTE philosophy

is the emphasis on value clarification, decision-making, and empathy. It is a philosophy that has seen as natural outgrowths the introduction of yoga and meditation in some schools, increased enthusiasm on the part of administrators for student participation in decisionmaking, and increasing community and parent involvement. DARTE graduates have only good things to say about the program. Most pour out enthusiastic observations tempered with realism, such as a curriculum coordinator's formula. But it gives you the security to get going, to get started. It gives you the feeling that something can be done, that an effective program can be adapted to meet the individual needs of your community."

The only criticism that DARTE veterans can be persuaded to offer is that they did not get enough of a good thing. The seemingly successful DARTE program was started in September 1970 when the Wayne County School District, an administrative structure without authority which provides services to the 37 autonomous county districts, received a $126,000 drug abuse education grant from the Federal Office of Criminal Justice to structure a program that would serve the 700,000 Wayne county public school students, teachers, and administrators. Consultants from the Michigan Department of Education and the Governor's office of Drug Abuse, and professionals in related fields were called in to help design the program. The DARTE program was designed as much to change schools as to change students' minds about drugs. It was also shaped by an important tradition in Michigan public education, which stresses local development of a curriculum that is exclusively designed to meet local needs. Hence, the DARTE emphasis on training trainers, the reluctance to develop comprehensive curriculum guides, and the stress on teams that would be effective in designing programs for their own unique situation.

Success in developing action-oriented teams is the main criterion for evaluation of the DARTE program. Tests administered by a private evaluation agency also show a significant increase in trainees' knowledge of drugs as a result of the sessions, but the DARTE administrators point out that these tests measure only a small part of what they hope to accomplish.

In summary, the four major aspects of the program include:

1. The program is more a process than a package. It is constantly being revised and tailored to meet needs of individual districts. It is not a canned approach masquerading as the answer to the problems of all schools in all places.
2. DARTE features major, even pervasive, student involvement, insisting that students be given an equal voice in team planning.
3. The training sessions force school district teams to take a new look at what students and adults can do together to make schools better and combat drug abuse.
4. By including values clarification, role playing, and communications effectiveness in the training, DARTE is injecting a "humanness" into involved school districts.

Case Study

Parkway Drug Education Program
Parkway, Mo.

In Parkway, a wealthy suburban St. Louis school district, parents and students report they are sick of hearing about the dangers of drug abuse. Drug education, it seems, has reached the saturation point in this district made up of subdivision homes that have sprung up over what 10 years ago was pasture land.

"I'm so sick and tired of hearing about drugs," a disgusted parent complained. "Why, right now all three of my kids are writing papers on drugs. It must be all they hear about at school."

In a district where passing the annual bond issue is a top priority, administrators listen carefully to parents. As a result, the Parkway schools are in the process of converting from a drug education program aimed at saturating the classroom with pharmacological information to a more sophisticated approach, emphasizing values development, decisionmaking skills, and teacher sensitivity to the problems of their students.

Saturation came quickly to Parkway, where administrators woke up to the drug problem in 1969. According to a school district report, it was a "rude awakening." Students were arrested for violation of drug laws, the PTA began asking questions, and the schools began to feel pressure.

"Some school systems are more fortunate and are able to anticipate these needs far enough in advance so as not to produce a crash program," Parkway drug education directors report, "but it was under such pressure that our school district first got into drug education."

Once the heat was on, school administrators started scurrying around the country, attending meetings, such as the drug abuse prevention sessions of the National District Attorneys Association, and visiting other districts where drug programs were thought to be exemplary.

The frantic idea gathering was the catalyst for several programs at Parkway, but most of the drug education program evolved from a teacher-parent committee that prepared a comprehensive K-12 curriculum guide during a crash 1-week workshop.

Much of the impetus for the committee work came from the Citizens' Advisory Council, a permanent group that offers advice on a wide range of school issues. A member of the advisory group recalls her early efforts: "At first the school people said there was no drug problem. But we knew there were drug raids in our subdivisions, and we knew we had to get to these kids before they got much further." This member worked with another parent who was a pharmacist to stir up community support for drug education until Parkway parents were adequately agitated, and school administrators were caught up in the fervor. Eventually the drug education curriculum planning committee was formed.

Program Development

Before the 22 teachers and two parents sat down to write the curriculum guide, they attended a 30-hour intensive training session at the St. Louis School of Pharmacy. Under the tutelage of Dr. Taylor Lindhorst, a pharmacy school professor, the committee learned the ABC's of dangerous drug pharmacology. With funding from the Danforth Foundation and the Missouri Law Enforcement Assistance Council, Lindhorst has put together an impressive course, using the latest films and the experts with the biggest names in the Midwest. At his sessions teachers heard psychiatrists, health educators, narcotics agents, district attorneys, and other law officers lecture on drugs.

After the summer session in 1970 at the pharmacy school, the committee settled down to a work and study session that included consultation with local physicians and viewing of videotapes made at the National Association of District Attorneys' seminar on drug abuse.

The committee turned out a carefully worded, comprehensive 119-page curriculum manual that promptly attracted statewide attention. The Missouri State Department of Education adopted the manual as its own, and financed the printing and distribution of copies for all the State's school districts.

The Curriculum Guide

The guide, directed exclusively to classroom teachers, consisted of about five parts pharmacology to one part personality development and values training. For the early grades, K-3, the manual stressed developing respect for medicines, elementary health, decisionmaking, and self-concept development. Specific goals were to introduce the medicine cabinet, teach the pupil to take medicine under proper supervision, discuss the resemblance between medicine and candy, introduce the sign of the skull and crossbones as an indicator of poison, and discuss methods for making decisions.

The guide contained lists of classroom discussion questions such a "Suppose you were playing in your home and found a box of pills or a bottle of medicine open on the table. What would you do? Tell why."

Role playing games were also suggested. In one such game, students were to take the parts of a doctor, a mother, a sick child, and her brother. In the dramatization, the children demonstrated the importance of placing medicine out of the reach of children, carefully measuring medicine, and taking it at the intervals designated by a physician.

Included in the guide for classroom duplication and use were a series of drawings featuring characters resembling "Peanuts" cartoon children. One drawing showed a disgusted Snoopy, obviously reviled by something in his dinner bowl, exclaiming, "Phooey! Watch out what you put in your mouth!" The guide suggested that teachers make copies of the drawings and distribute them to children to color.

For grades 4–6, the guide recommended that teachers become more specific in their teaching about drug problems. Objectives included explaining how drugs affect the mind and body, supplying an adequate amount of information to the student so that he or she could make a rational decision concerning the use of chemical substances, and discussing the historical, legal, social-cultural, physical-medical, and psychological aspects of drug use.

A section on the history of drugs instructed teachers to discuss the early travel of explorers who discovered opiates and tobacco. Another history lesson focused on the use of drugs in religious rites; another, on the occurrence of drug addiction surrounding wars as a result of the use of drugs to kill pain.

Also included for this grade level was an 11-page section on the pharmacology of drugs, designed to help the teacher explain the chemical makeup and likely effects of the drugs most commonly abused.

Sandwiched in were suggested discussions of social values and problem solving. In one suggested activity, the teacher was to lead a discussion on problems the children faced, and offer ideas on how pupil frustrations might be resolved.

A Social Studies Unit

For the junior high school, the curriculum guide specified teaching drug education as a separate unit in social studies classes, rather than integrating it freely at the discretion of the teacher, as was the suggested method for the elementary grades. A lengthy outline of the history of drugs was provided for the seventh grade, followed by a series of reproducible charts detailing the nature and dangers of various drugs. Similar outlines were provided for eighth and ninth grades, with additional teaching suggestions focusing on legal aspects of drug use.

For the senior high, the manual also stipulated that drug education should be taught as a self-contained unit in social studies classes. Objectives were similar to those for other levels, including fostering an understanding of the nature and effects of drugs, teaching about the history of drugs, and emphasizing control of drugs by law enforcers. Materials provided for teachers on the high school level included a complete list of Federal laws pertaining to drugs and an outline of drug pharmacology.

One section, titled "Social Effects," encouraged classroom discussion of values in American society, reasons behind drug abuse, religious and moral values, and the social consequences of drug abuse.

Teacher Training

With the curriculum guide completed and school about to begin in the fall of 1970, the Parkway staff rushed ahead with implementa-

tion plans. Teacher training sessions were held in each school building to introduce the curriculum guide. A drug resource teacher was appointed at each school. More teachers were signed up to take the course at the School of Pharmacy, and the drug education program went into the classroom with the goal of exposing all 20,000 district students to a basic course in 1 year.

In terms of exposure, it was a tremendous success. As for any resultant reduction in drug abuse among students, or a significant change in student attitudes, program administrators are not so sure.

According to the director of pupil personnel services, feedback from students and parents was not overwhelmingly favorable. Both groups, especially on the secondary level, complained of too much drug education. Some decried the emphasis on a factual, pharmacological approach. However, a counter argument was expressed to the effect that students probably do not know as much about drugs as they would like to think, so that a factual, pharmacological approach must be maintained.

A More Balanced Program

After the first intensive year, however, the factual and chemical approach will be deemphasized in favor of a more balanced program featuring more emphasis on values training, decisionmaking skills, and sensitivity.

Guide Revised

The curriculum guide has been revised to eliminate some of the duplication and emphasis on pharmacology, and to encourage more discussion of values. To get parents behind the approach, adult evening courses have been held and more are planned. To make sure effective decisionmaking skill development and values training are included in the elementary school curriculum, Parkway schools have purchased dozens of DUSO kits, packaged multimedia programs distributed by the American Guidance Service, Inc., of Circle Pines, Minn. DUSO, for Developing Understanding of Self and Others, is used in K-3 classrooms to facilitate role playing, puppetry, singing, and a variety of other activities designed to help children develop emotional maturity.

Major impetus for the changes in direction came from an 11-student panel that assisted in the revision of the curriculum guide. The students, hand picked by school counselors and teachers to represent a cross section of Parkway high school sentiments on drug use, say they were impressed by the amount of input they were able to make. "They really made a big effort to find out what we thought. The whole thing was really centered around us," one student said of the curriculum committee.

Students previewed films and offered their evaluations, were asked an endless series of questions by the adult planners, and argued among themselves about the nature of drug abuse.

Another student consultant remembers that "Our biggest disagreement was over whether or not you can say drugs are wrong for people, or whether it should be an individual decision."

One thing the high school students did agree about was that the main emphasis on drug education should come at the elementary and junior high school levels. "By the time you get to high school, you know most of the factual stuff about drugs. We don't need more of that. What we need is to have established decisionmaking skills by the time we get here."

Reactions to Program

One of the best examples of the new subtlety in drug education is the program at West High School. Students questioned at West during the 1971–72 school year did not know there was a drug education program at the school. "That's just the way we want it," a counselor explained. "We try to get the teachers to work with individual kids, to get close to those students who are not experiencing success." The program operates on the theory that students turn to drugs because they do not experience other kinds of fulfillment. "We want to get to the kids who are sitting alone in the lunchroom, to help them achieve success."

So far, success had been spotty but encouraging. "We had one long-haired kid with a beard who was having troubles. We got him to go out for the football team, and now he's

doing great. He's even getting the coaches to open up and accept long hair. You see, a kid can't be on a football team or the debate team and still be a heavy drug user. You don't really change kids at the high school level by pressuring them or lecturing to them. Instead, teachers must approach problems on an individual basis, and with great sensitivity."

Case Study

Programmed Learning Units in Drug Education (PLUDRUG) Milwaukee, Wis.

In Milwaukee, school officials are working with the University of Wisconsin on a new approach to drug education, an expensive computer-assisted instruction operation called PLUDRUG (Programmed Learning Units in Drug Abuse Education). Instead of sitting in the traditional classroom listening to a chalk and talk, Milwaukee high school students now have access to a teaching machine where they may plug in and punch out responses to a wide variety of programed materials.

Computerized Program

The computerized drug program is costly and without benefit of scientific evaluation, but students reportedly enjoy the approach so much that they are reluctant to leave their personal printout machines when the allotted time runs out.

Sitting down at one of the typewriter-like gadgets, a student has a choice of dozens of computer-stored simulation problems and role-playing games. He may choose to start with a selection from the Computerized Decision Development Competency Program (DEDEV), a companion program used with PLUDRUG. A selection list tells the student which numbers to punch on the keyboard to elicit the program he has picked. Instructions are then printed out by teletype.

"This is module ten of a computerized program for developing decisionmaking competency among teenagers and youth," the printout confirms. "It consists of 20 different simulated social problems, each provided with five possible answers or solutions. The main purpose of the unit is to develop in the individual competency in the scientific process of decisionmaking in relation to social situations."

Role Playing

When the student is sure he understands the directions, he punches a key and the machine feeds out a role for him to play. The student is told to be an unwed mother, a socially popular teenage girl, a young man faced with a draft notice, an interracial dater, or perhaps a high school student facing peer pressure to use drugs.

When the student completes the unit or tires of the role, he may want to go to a Drug Abuse Education Program unit. In the PLUDRUG selections, the student can pick from scores of units ranging from strictly information printouts on drug pharmacology, to the pathetic narration of a heroin addict, to a simulation problem in which the student is asked to play the role of a drug user.

Used together, says the public schools guidance director, the decision development program and PLUDRUG are exceptionally effective tools for helping students make the right decisions about drugs. He lists two main reasons for using the costly computer instead of sticking to cheaper textbooks and class lectures or demonstrations.

First, and most important, "the kids are fascinated by the computers. They can work in small groups around one machine and interact with their friends while using the program. They can take the printouts home and have something to show for the time spent."

Second, students prefer learning about drugs from computers instead of teachers. "The kids tell us that the computer is more honest, less biased than teachers and counselors, and the students can make a computer respond to what they want perhaps more easily than they can with a teacher."

Under the auspices of the guidance department, the computerized program was first used by the Milwaukee schools during the 1970–71 school year. More than 400 students traveled to the Milwaukee campus of the University of Wisconsin to use teletype terminals. Many of the initially involved students were recent returnees from reform schools. They seemed to need this kind of instruction more urgently than some others. During the 1971–72 school

year, the computer program is to be offered to as many as 6,000 students from six central city schools. Terminals were installed in one high school in 1971, and plans called for a hookup in at least one other school.

Development of Program

PLUDRUG and the the companion decision-making program are the brainchildren of Dr. Russel Cassel, a retired Air Force officer who has decided to devote his life to "doing something about youth delinquency and related problems." Cassel, now a professor of educational psychology at the University of Wisconsin at Milwaukee, wrote the programed instruction units after consultation with experts. Cassel says he used the resources of the American Pharmaceutical Association, the National Education Association, and other agencies concerned with drug abuse in preparing the units. But his major resource was the experience gained during his years as a resident psychologist at a general hospital in the Northwest and as a public school psychologist in Arizona and California.

Cassel emphasizes that his units lead to conclusions based on the feelings of "the mainstream of American society." But, he points out, that does not stop him from offering objective information to students—information that includes the pros of drug usage as well as the cons.

Sample Unit

An example of the balanced view given students is Cassel's unit on the experiences of a heroin addict. He says the unit is an actual case study drawn from his professional files. The unit printout begins with "Marjorie" telling her own story. "Everyone had stars in their eyes," Marjorie says of her early experiences with use of illegal drugs. "It was flowers, beads, and love. Everything was beautiful," she recalls. Then the computer cuts off the story to ask the student why Marjorie thinks she started to use drugs. If the student gives the correct answer ("Everything was beautiful, they thought.") the narration continues.

Next Marjorie tells about going to college and getting hooked on heroin by a pusher. "He put out enough heroin to get me and my boyfriend interested and then when we didn't have the money to buy, he'd . . . give it to us free. Then came the day when he said 'Well, you are going to have to pay me back.' " If the student answers the question about how Marjorie got hooked correctly, he can go on to learn what heroin did for her. "Heroin gives you a sense of complete peace, a sense of complete relaxation, euphoria," Marjorie explains, "It's like the covering over the bird cage, closing off everything . . . you can feel all of your bodily aches just disappear, melt away. I loved it, it was the most gorgeous high, the most beautiful in the world. I was completely convinced that at last I had found the queen of the drugs."

There the teletype narration stops, and the student is asked why Marjorie says that heroin is the queen of the drugs. If the button keyed to the correct response ("It gives the most gorgeous high") is pushed, Marjorie comes on strong with a description of the negative aspects of heroin use. She tells of throwing up "like a maniac," of violent fights with her boyfriend, of turning to prostitution to pay for heroin, of hepatitis, and of her unsuccessful attempts to quit the stuff.

As we leave Marjorie, she still has not been able to stop using heroin, but she does have some parting words of advice: "You can tell a million persons about the cure, but taking it is so much more difficult than not beginning in the first place. My body tried to tell me from the very beginning that heroin was wrong, but I just wouldn't listen. Anybody who has a grain of sense . . . would understand the warning."

To close the unit, the student is asked "What lesson does Marjorie have for nondrug users?" The choices are:

- Heroin is not for the human body.
- Heed the warning signs for early use of drugs, and don't use it.
- Treatment is very difficult.

All three answers turn out to be correct.

Now that the PLUDRUG and decisionmaking units are developed, and Marjorie is telling her story to Milwaukee students, Cassel is wondering how the program may best be used in the schools, and how it can be exported from Milwaukee.

Drug I.Q. Test

To give the program a boost with evaluation-conscious school officials, Cassel has developed what he calls the Drug I.Q. Test, a pre- and posttest set designed specifically to accompany PLUDRUG, but supposedly suitable for use with any drug education program. Each test form contains 70 multiple-choice questions, and may be given to a class in about 30 minutes. Cassel has provided statistical norms for junior high, senior high, college and graduate students, nurses, and policemen. According to Cassel, his test "provides a diagnostic indicator of the degree to which one possesses pertinent drug information;" and accurately tests knowledge of classes and effects of dangerous drugs, nature and types of drug addiction, reasons for drug abuse, treatment of drug dependence, drug control laws, and drug vocabulary. The tests do not measure attitude changes or decisionmaking skills development. The Drug I.Q. Test set is commercially published by the Christopher Publishing House, North Quincy, Massachusetts, which has also published a programed textbook version of PLUDRUG.

Problems With Program

The biggest problem the Milwaukee schools have with the program is a financial one. During the 1970–71 school year, the 400 students who used the university teletype terminals did so partly at their own expense and on their own time. Students had to provide their own transportation to the campus, and had to go there at times when school was not in session.

Even with the students paying their own way, and with the university providing staff time and services free, the computer-assisted instruction has already cost the district about $10,000. Much of the money goes to pay for computer time at the university's Madison campus. Since the computers owned by the Milwaukee schools were working to capacity on other projects, the district had to tie into the Madison computer, and pay the resulting long distance telephone line charges.

With the installation of teletype machines at a district high school, the telephone company agreed to donate long distance services on a temporary basis, but there is still the cost of the teletype rental—about $70 per month, per machine.

As a result of money problems and scheduling difficulties, most students using the Milwaukee facilities will get only about 1 hour a year to play with the machines. By working in groups, some students will be able to spend perhaps twice as long in front of one of the consoles.

But, Cassel says, it is possible to reduce the cost of the program and arrange for more extensive use. He is investigating possibilities of using computers in the Milwaukee area so that long distance telephone lines may be eliminated. By use of computer equipment called a multiplexer, Cassel says several teletype machines can be hooked to the same line, reducing costs still more. By introducing evening programs in schools, computer time cost can be cut in half, he suggests.

He envisions computer terminals in all high schools in a district, perhaps located in booths in resource centers where students could use them during free time, much as they would use a library book or tape recorder.

But, it should be noted, perhaps the biggest hindrance to effective use of the computerized drug program in the Milwaukee schools is not the cost, but the lack of effective coordination of PLUDRUG and other district drug education efforts. The computerized program in its first 2 years has been in the exclusive domain of the guidance department, while the main responsibilities for drug education in the district rest with the health and physical education department. During the first year of PLUDRUG use in Milwaukee, the health and physical education department was virtually unaware of the program's existence.

Conducting its own shotgun-type approach to drug abuse education—holding special seminars, using commercial materials, and relying on a pharmacological approach—the health and physical education department put little emphasis on the decisionmaking skills that are the heart of the PLUDRUG program.

Replication

As for the possibilities for exporting his program to other districts, Cassel says they are

good. Even smaller school districts should be able to afford the program, he says, especially if they own or have access to a Burroughs 5500, a Univac 1106 or 1108, or a PDP-8 computer. Cassel is investigating the possibility of feeding his program to a central computer that could serve the entire Nation through telephone line hookups. Meanwhile, he says, he might be able to find time to assist, on a consultant basis, school districts wishing to try out his program.

"But what I really am looking ahead to," says Cassel, "is the day when Pluto 4 is ready for commercial distribution." Pluto 4, he explains is a computer terminal that features sight and sound—sort of a television replacement for printout. When it is ready, Marjorie can tell of her heroin agonies more convincingly. And, says Cassel, "It will revolutionize everything."

Case Study

Project PRIDE (Professional Resources in Drug Education) Dade County, Fla.

When the consultant in drug education for Dade County Public Schools talks about the multiplier effect, he's referring to the process used to deliver drug education training to every teacher in the Nation's sixth largest school system in a matter of months.

Training more than 11,000 teachers in the complex and sensitive field of drug education is a tremendous task, but the Dade County schools really had little choice. The Florida Drug Abuse Education Act, passed in 1970, required drug education for all the State's students before the end of the 1970–71 school year. Under pressure from the law, the county educators had to train their teachers properly before drug education could be universally offered to the quarter of a million students of the greater Miami area.

Program Development

Dade County already had a drug education program, but it wasn't operating in all schools, and didn't amount to much more than physicians speaking to teacher groups and the distribution of a few curriculum guides. The new law was an incentive to start anew, and the Greater Miami Crime Commission was also pushing the school board into action when it recommended that $250,000 be spent on a drug abuse program for county schools. The school board accepted this suggestion, and the money was quickly earmarked for a new drug education program. Given 1 year to put a drug course into every grade and considering the number they were working with, school officials decided to provide first teachers with training in drug education and then supply them with printed support materials, suggestions, and other resources they could use in their classrooms.

The responsibility for setting up these new programs was given to the Health and Physical Education Department of the county's Division of Instruction, and specifically to two men: Hy Rothstein and Bob Adams. Rothstein was designated consultant and Adams, coordinator. The background of these two men was similar. Both had been physical education and health instructors, and Rothstein served as both a guidance counselor and curriculum specialist at various times before coming to the county office. The program was named PRIDE, or Professional Resources in Drug Education, with the idea that both personal and school pride would encourage better health practices among students.

Training Teachers

The staff decided to use the multiplier effect or the "triple T concept" (teachers training teachers to train other teachers) to accomplish the job. By this process 28 qualified teachers gave a training course to 298 representative teachers from all county schools; these 298 teachers returned to their schools and coordinated training sessions for the other teachers.

The 28 qualified teachers who would act as trainers were selected from 27 community schools strategically located throughout Dade County. Sponsored jointly by the school board and the communities, these schools offered a variety of evening courses for both youth and adults, one of which was a course on basic pharmacology. The teachers had been trained for this course by the Florida Department of Public Safety. Eleven community schools were chosen as training sites and the first session was held in October 1970. Every school in Dade County was asked to participate. Principals were told to select one elementary teacher, two junior high teachers, and three senior high teachers to attend the sessions. The 298 teachers met at those community schools closest to their homes one night a week for 8 weeks, 2 hours each session. The 16 hours of training included lectures and discussion sessions with doctors, lawyers, ex-addicts, law and narcotic enforcement personnel, pharmacologists, and psychologists. The program varied from school to school because the professionals selected as speakers were chosen

from community volunteers in an attempt to keep the program local. The use of local people also enabled teachers to become familiar with professionals nearby who could assist them if referrals for students were needed or if urgent questions required quick answers.

Resource Teachers

Once these 298 teachers completed the training sessions, they returned to their individual schools and were designated "drug resource teacher" for that school. Working with their principals they began setting up training sessions for all the remaining teachers. Although the teachers were relatively free to conduct the sessions as they wished, they were encouraged to use the National Instructional Television (NIT) series *Drugs: The Children Are Choosing*, which stresses the legal, medical, psychological, and sociological causes and consequences of drug abuse. By March 1971 all county teachers had received training in drug education and were ready to begin teaching in the classroom. Here again the county allowed each school to decide which subject areas would feature drug education and encouraged each teacher to devise an individual program. Only at the 10th-grade level did the county specify that in those high schools that have specialized health teachers the required course in health and driver education must include a minimum of 3 weeks' instruction on drugs. In other high schools, drug education is offered as part of social studies or physical education.

Materials and Services

Many materials and services have been designed to help teachers plan and teach drug education. For fourth through seventh graders, nine Learning Activity Packages (LAPS) were written. LAPS are units that deal with specific topics such as LSD, smoking, and marijuana; they feature reading, worksheets, and student tests. Student handbooks and teacher guides were prepared for all levels—elementary, junior high, and senior high; and films and filmstrips are constantly being purchased, reviewed, and placed in district resource centers. Teacher kits, called "PRIDE Envelopes," contain a variety of pamphlets put out by agencies such as the National Institute of Mental Health, a narcotic identification guide, Katy's Coloring Book about Drugs and Health designed for young children by the Bureau of Dangerous Drugs and Narcotics, and other guides and booklets dealing with drugs, alcohol, and tobacco.

A Resource Book, distributed yearly, serves as a reference guide to the resources available from both the county office (films, readings, speakers' bureau, etc.) and from the various community agencies that deal specifically with drug problems. There are also over 40 rehabilitation and treatment centers located in the Miami area where schools can refer students with drug problems who are beyond the teacher's help.

Another source of assistance is the District Resource Specialists, another service from PRIDE. These are people assigned to each of the six Dade school districts who act as consultants to teachers, offering suggestions and resources whenever asked. Each is responsible for stocking a district resource center with books, filmstrips, and other materials.

In addition to consulting services, they are available to speak to PTA meetings, conduct inservice training courses, and set up drug education displays at educational conferences and in the community.

The county encourages schools to involve parents in the PRIDE program whenever possible. PTA study groups on drug education exist in some schools, and newsletters that describe drug information resources are sent out. In 1971 an insert describing the PRIDE program was sent out with report cards, printed in both English and Spanish.

Another Phase

A second phase of the program was begun early in the 1971–72 school year. This phase emphasizes the development of communication skills and techniques in group dynamics. Outside consultants were enlisted to develop staff training programs, initially centering on guidance counselors and then expanding to reach all teachers if finances permit. As of November

1971 various programs were already in operation. In the South and Southwest districts a 10-week, 30-hour course entitled "Human Relations Program for Educators in Youth Awareness and Drug Abuse Prevention" was offered for all secondary guidance counselors. The training team for this course included psychopharmacologists, psychologists, and a psychodrama specialist. In Dade's South Central District 15 students and 12 teachers took a training program designed to prepare them to be volunteers in school counseling offices.

The program is designed to make the students and teachers better listeners and to present them with referral sources for students with drug problems. In the other three districts counselors are being trained by local clinical psychologists and counseling experts.

The community schools are also involved in this phase. During the first semester of the 1971–72 year the schools offered basic and advanced drug education courses to both public and private school teachers. The public school teachers who took the basic course were new school resource teachers replacing those who had left the preceding year. In addition, training for counselors was also provided by experienced instructors from Genesis House, the live-in facility for heroin addicts. As of February 1972 forty-one counselors had participated in the program and about a dozen were selected to serve as informal drug counselors for the 27 community schools.

As another part of the second phase, high schools are being encouraged to implement a "teen involvement" approach (see CODAC's Teen Involvement Program). High School seniors are selected to speak to fifth- and sixth-grade elementary classes about the dangers of drugs. Counselors who have received special training through the programs listed above are acting as coordinators for this program and training the seniors.

Using trained counselors in rap rooms is another projected program for phase II. The program coordinator hopes to have rap rooms with "open door policies" in all secondary schools, where students can go to talk over problems without fear of reprisals.

Although recognizing that PRIDE will not cure all drug problems in the Dade schools, the coordinator feels that the program is on the right track. Every teacher in all 235 county schools has received some training in drug education, and teachers and students are talking to each other.

Case Study

Regional Community Services Program
The State of Oregon

George Dimas, head of the Alcohol and Drug Section of the Mental Health Division of the State of Oregon, isn't buying the idea that local school districts are fully capable of developing their own drug education programs. "Schools can't even respond to their normal problems," he contends, "let alone big, new problems." And that's where he and his staff of specialists come in, to provide professional services to all the school districts in the State that ask for help.

Dimas is all for local efforts to develop drug education programs, but he insists that the local efforts are overwhelmingly handicapped if they are not augmented by a statewide "system for delivering educational services." That is exactly what his division is trying to build in the State.

He begins by talking about the needs of people. Those needs, he says, are likely to differ with location. So a State agency cannot set itself up in one place and proceed to dish out standardized publications and audiovisual materials for universal use. "Needs occur at a variety of settings, and at a variety of levels," he explains, "so the State must be in a position to deliver educational services at the point where the people are, at the point of need."

To make those deliveries, the division has carved the State into five regions, hired a field representative for each region, and assigned each field representative to become involved in community projects and school drug programs. The field representatives are the all-important catalysts in the system, the specialists who deliver the services. The field representative is therefore a sort of county extension agent for drug education.

"There must be an organization that has exclusive responsibility for delivering drug education services," Dimas insists, "and that organization should be one that deals exclusively with the problem." That is his way of saying that a State department of education, or any other State agency for that matter, is not as equipped to deal with drug education as is the section of the Mental Health Division that has drugs as its private domain. (When Dimas and his coworkers talk about drugs, they include, with emphasis, alcohol.)

Tying the concept of the field representative together with the assertion that an agency such as his should have exclusive responsibility for drug education services, Dimas explains that his employees are doing what all drug education specialists must do—they are working in the community with those who have drug abuse problems. They are what Dimas calls "street people," in other words, people who work on the streets with those who need care and rehabilitation.

And what exactly are the field representatives doing on the streets? Mrs. Anne Basker, field representative for the expansive southwestern corner of the State, provides a representative case study. An active community leader in her hometown, Mrs. Basker is immersed in the problems of her area. A typical day may begin with a stop at her office to sort through a sizeable pile of mail that will include a package from a clipping service that keeps her informed on what's happening in her five-county region. Also in the mail will be requests from school districts for various drug education materials prepared by the Alcohol and Drug Section.

But Mrs. Basker doesn't spend much time in her office. By mid-morning, she may be in conference with teachers at the local high school discussing the drug education program she has helped put together there. The teachers may want to review or clarify some information they received at one of the regional institutes conducted by staffers from the section. Or they may be interested in finding new ways for students to use local rehabilitation centers as learning resources. Since Mrs. Basker provides support services to the rehabilitation centers, she will be able to help the teachers. Next on the agenda may be a request from one of the teachers for new books in the classroom library that the section supplies, or for more films, filmstrips, and videotape, furnished free on a loan basis.

Before leaving the school, Mrs. Basker may stop to talk with a student who shares responsibility for running the local Hot Line. They will discuss the emotional and drug-related problems of the 40-some callers who ask for help over the telephone each month, and go over a list of the referral services the high school volunteers who staff the phones have at their disposal.

Sure to be included in the day's agenda will be a stop at one of the area detoxification centers or recovery houses. Mrs. Basker may be stopping by to drop off materials, to attend a conference, to arrange for a visit by high school students, or just to see how things are going. She says the recovery facilities are the easiest part of the drug education and treatment program to sell to the communities in her region.

She may then attend a luncheon meeting of the Josephine County Council on Alcoholism. This independent group, supported by the section, is the kind of community program Dimas feels is more important than an isolated school effort. Local businessmen, clergy, and educators are the leaders of the group, which carries on a program of public and professional education. The county council staffs an information center, runs the detoxification center and recovery house, supervises a self-help operation for teenagers with drug and drinking problems, sets up seminars on alcoholism, and works with local courts to make sure those arrested for drug and alcohol-connected offenses get the kind of sensitive handling they need.

After the luncheon meeting Mrs. Basker may corner a zealous localite who is convinced the town should launch a scare program to bust or intimidate anyone suspected of using drugs. Such crusades surface with regularity in conservative southwestern Oregon, and Mrs. Basker does what she can to guide them back onto the right track. She has been fairly successful in dissuading local radio stations from following the leads of their counterparts in other areas where shallow antidrug crusades have been launched over the air. But she has not been so effective in the largest town in her region where the mayor sponsored something called "Operation Denial," a system for turning in drug offenders to the authorities. Mrs. Basker feels that such an approach is not effective in getting at the root causes of drug abuse.

In the afternoon, Mrs. Basker may drive over a hundred miles to other communities in her region where she will sit in on a county school district planning session on drug abuse education, or work with a junior high school honor class that is engaged in a special project focusing on drug treatment and rehabilitation.

Meanwhile, Dimas and his staff at the central office are working to provide Mrs. Basker and her four fellow field representatives with the kinds of materials and services they need. These must stress the positive. "We must not dwell," he asserts, "on the negative aspects of alcoholism and drug abuse. Instead, we must stress the positive elements of living." This philosophy is evident in all the publications of the section and in the curriculum guides developed in cooperation with other State agencies. The scare approach is strictly avoided in all the materials, and rational, open exploration of alternatives to drug abuse is encouraged.

The central office also cooperates with faculty from the University of Oregon Medical School and other agencies and State leaders in sponsoring the annual Western Institute of Drug Problems. During a 1-week session teachers, administrators, doctors, nurses, and other professionals come together for intensive study of all aspects of drug use, abuse, and treatment. Topics for the Institute, whose administration is handled by Dimas, are as diverse as "The Influence of a Rock Festival and Drugs Upon a Community," "Confronting the Families of Drug Users," and "Psychiatric Correlation in Various Drug Programs."

The regular, ongoing services of the section include the maintenance of an 85-member, full-time professional staff which may be drawn upon when needed to help field representatives. These staff members may be used, for example, to support one of the multiplier effect teacher training programs recently carried out in the State.

Another example of support services grew out of a recent panic in a school district near Portland where students had been experimenting with glue sniffing, and the local officials were justifiably concerned that some students might soon suffer severe effects from their experimentation. Specialists were called in to produce a school program on glue-sniffing within a 2-week period. With the help of the field repre-

sentative for the area, the program was introduced into the school curriculum.

But there are problems with the local delivery system, Dimas admits. As with so many other programs, a major problem is money. It costs about $35,000 a year to operate a regional office. Considering the large professional staff in the section, the rehabilitation functions that eat up most of its budget, and Dimas' insistence on providing materials and services free to the schools, there just isn't enough left over for the optimal number of regional offices.

Dimas is convinced, however, that this plan is the wave of the future, and will eventually be funded at an adequate level in Oregon and other States.

Case Study

The Use, Misuse, and Abuse of Drugs and Narcotics
Laredo, Tex.

In Laredo, Texas, a border town on the Rio Grande, the local school district has accomplished what many people, especially the taxpayers, say can and should be done more often in the public schools. Spending almost no local school funds, a group of teachers developed a drug education program tailored to meet the needs of the children of Laredo and the people who teach them, and of their particular locale —a rural community in southern Texas.

A 540-page curriculum guide called "The Use, Misuse and Abuse of Drugs and Narcotics" was designed for use in all grades, K-12. The Laredo guide is different from most curriculum guides for a number of reasons. For one, the subject of drugs is integrated into the regular classes so there is no 6-week unit on drug abuse to turn both students and teachers off. You can enter a junior high mathematics class and find students working out percentages and ratios on the number of arrests for dangerous drugs in the last 6 years, or visit a senior high school English class and see kids performing skits based on James Mills' novel *The Panic in Needle Park*.

Another noteworthy difference is that the program deemphasizes pharmacology and concentrates instead on children's attitudes, frustrations, and the general problems of growing up in today's society. Most schools beginning their first attempts to develop interesting and worthwhile drug curriculum in their classes never get beyond the show-and-tell stage of teaching *about* drugs, and hardly ever address themselves to *why* students turn to drugs. However, even in first grade, Laredo pupils are discussing topics such as "Why is it necessary to have friends?", "What are the disadvantages and advantages of being different or alike?", and "How do you act when you're lonely? depressed? angry?" The teachers encourage the kids to speak freely and openly and don't cut them off to go on to another subject if the clock says they've spent too much time "just talking."

Finally, the guide was written by teachers, with little help from outsiders, and so reflects the unique concerns of the local community. Children are taught to recognize harmful plants growing in and near Laredo and learn what can happen if they accidently swallow poisonous psilocybin (Mexican mushrooms) or chew the leaves of the lantana plant, a common ornamental plant grown outdoors in the South.

Setting

Most of the 80,000 Laredo citizens farm; work in Federal, State, or local governmental jobs; or clerk in the retail stores downtown. Ninety percent of the population is Spanish-speaking Mexican Americans who maintain many of the traditions from the days of the Spanish settlers; the average income is around $5,000 a year. The community is hard working and friendly.

Across the border is Nuevo Laredo, and the two cities together are the main border crossing points for Mexico on the Pan American Highway. The people here remember the massive traffic nightmare caused by Project Intercept, which involved a careful search of incoming cars for illegal drugs. Up until 1969 it appeared that drugs purchased in Mexico went right on through Laredo like the many tourists, and so there wasn't too much concern with illegal drugs. But then it happened in Laredo much as it happens everywhere else: two young Laredo boys were arrested and jailed in Nuevo Laredo, headlines glared from the newspapers, and the people realized that they too had a problem.

The drug curriculum coordinator expresses what many felt at that time when she says, "We all had heard about drugs for a long time, because we're a border town. But we always thought they were taken elsewhere. Suddenly it looked like the traffic was beginning to stay here and we grew very concerned." This concern led to the formation of a Citizens' Committee-War on Drugs that consisted of school administrators, doctors, religious leaders, and alarmed and interested citizens. This commit-

tee under the direction of a local physician wrote up a proposal for funds for a drug education program for Laredo schools and submitted it to the U.S. Department of Health, Education, and Welfare. A grant for $9,000 was approved, and the committee was given 1½ years to complete the job of producing a sequential drug program for grades K-12.

Program Development

The first step in the project was to set up a writing committee made up of 22 persons, most of them teachers. Four resource people were added later. The group decided to divide the work by grade level so that teachers who actually teach in grades 1, 2, 3, etc. would do the writing for these grades. In this way they were sure that teachers would be familiar with the grades and subjects they were writing for. The teachers knew not only the needs of a particular level, but also the peculiarities of specific age groups. Four levels were organized:

Level I . . . . . Grades K-3
Level II . . . . . Grades 4-6
Level III . . . . . Grades 7-9
Level IV . . . . . Grades 10-12

For 6 months, before they attempted to write anything, the committee read, listened, and discussed. The money from the grant did not go towards salaries; it was spent securing reference materials, current research on drug abuse, and transparency sets, films, and tapes suitable for use in classrooms. The group also got ideas from workshops and conferences, from personal experiences of the teachers, and from consultants. Together the group reviewed the films, cassette tapes, and transparencies, jotting down what they liked and disliked.

As soon as the group began writing it ran into problems. The first time the four groups met to discuss what they wrote, they realized that they all had the same thing: What is an amphetamine? How do you identify an "upper"? etc. At that time there were few, if any, good curriculum guides to follow as examples, and the committee was trying hard to come up with something different. It was not having much success.

The next step was quickly decided upon. They discarded everything and started all over again. The second time around committee members were more satisfied with the results. For Levels I and II (grade K-6) the guides were written as complete units instead of separate guides for different subject areas. This was done because the elementary grades are self-contained classrooms and do not switch teachers with each subject. The writers of these guides, elementary teachers themselves, felt that teachers knew best when drug information could be incorporated into daily lessons and did not feel that separate science, mathematics, and English units were necessary. The Level I guide, for primary grades, did not mention hard drugs as such, because the committee felt it was more important to develop a child's personality at this stage than to highlight a social evil. So the guides for grades K-3 focused instead on mental health concepts, good habits, and positive attitudes. The committee believes that it is during these grades that children begin forming the opinions that influence how they will make decisions later in life, so that this is the time to introduce decisionmaking skills.

Curriculum Guides

In all of the guides the same format is used. There are *concepts* to be learned, *content* outlining those concepts, *motivating questions* teachers may use, and *teaching suggestions*. A representative concept for Level I was titled "Sound Mental Health Is Essential for Total Well-Being." The concept is put across by various low-key discussions. For example, in presenting the concept that people must assume responsibility for their actions, pupils talk about the responsibilities of school, family, and friends. They discuss why students must cooperate in a classroom, why some objects must be shared, and how they feel when they are asked to share. Suggested activities for these discussions involve cutting from magazines pictures having to do with sharing, and staging a puppet show with sharing as its theme. Children at this level also discuss differences among people. To point out class differences, the guide suggests having students trace their

hands and feet, group together on the basis of hair and eye color, and record their voices to show variations in pitch. The Level I guide also contains suggestions for teaching about prescription drugs, over-the-counter drugs, harmful and beneficial plants, and potentially dangerous substances that are usually found in the home, such as lye and ammonia.

The Level II guide is designed to give students in grades 4-6 a more detailed understanding of drugs. To avoid overlap, each grade focuses on a different aspect. Fourth graders learn how drugs are used as medicines, fifth graders study the history and classifications of different drugs, and sixth-grade students are introduced to the laws governing drug abuse. While students at this level get more facts about drugs than those in Level I, there is still much emphasis on personality development. In the fifth-grade unit, for example, many activities are aimed at getting the student to recognize personal limitations and potentials. Motivating questions here include: How well do you know yourself? Why is it important that you like yourself? and Do you know yourself better than others know you? In other Level II activities students discuss why people join groups and what responsibilities joining groups entail—both on the part of the individual and the group. Here, as in Level I, the emphasis is on providing the opportunities to let students discuss their own feelings, the feelings of others, and to talk about drugs when the time is right.

Departmentalized units were written for the junior high grades 7–9. In Level III there are units for English, mathematics, social studies, life science, and health and physical education, each unit written by the subject teacher. There was never any time allotment stated because the writers felt that starting and stopping points would naturally vary with each class and each teacher.

The English unit covers dictionary skills, use of the library, and writing skills. For example, themes may be assigned on topics such as "What I Think Should Be Done To Prevent Drug Abuse in My Community," and "Causes of Drug Addiction Among the Young." Pupils are also asked to write fictitious short stories about people using drugs. Sometimes the stories aren't fictitious.

In social studies, the guide presents two major concepts: one deals with teenage growth and environment, and the other with the history and laws of drugs. In talking about the school environment, discussions center around such questions as "What parts of the curriculum might cause certain teenagers to become frustrated, to drop out, or to take drugs?" and "How can the problem be solved by administrators with the help of suggestions made by teenagers?' A teaching suggestion for this discussion is to make a survey of the various facilities in the school that help meet the needs of different types of students—from auto shop, to pep clubs, to athletics—and then make recommendations to the school administration.

Both level III and Level IV committees had a difficult time adjusting the mathematics curriculum to anything relating to drug education. They decided to concentrate on teaching percentages, ratios, and proportions on drugs and drug use. For example, junior high students study a chart showing arrests by year (1960–1966) for dangerous drugs, marijuana, and narcotics. They then answer questions on the chart such as "In 1965 what was the ratio of those arrested for dangerous drugs as compared to total?" and "Compared the number of arrests made in 1964 for Marijuana with those made in 1965." In a class such as mathematics students must stick to the facts and not get off on discussions about the social aspects of drug use, but math teachers in Laredo say they listen to their students and permit them an open forum. They try not to turn students off when they start talking about their friends.

In Level IV's mathematics guide, students take surveys on drug issues and discuss random and bias sampling. They also apply set theory to drug education by dividing drugs into sets and subsets, such as hallucinogens and sedatives, or addicting and nonaddicting drugs. As in Level III, the mathematics teachers don't suddenly have a math lesson on drugs; they use what they are already studying and extend it to include information about drug abuse. And to avoid oversaturation, they only pursue drugs discussions if the students stay interested.

Besides math, the Level IV committee wrote units on English, American history, civics, biology, chemistry, health, and physical education. In English, classes debate current drug issues, such as "Should marijuana be legalized?"

"Does drug addiction always lead to crime?" and "Legalizing drugs would lessen addiction." One suggested history class activity is a field trip to a trial by jury where the defendant is a drug violator. In health class, the teaching suggestions in the guide deal mostly with mental health. Students discuss pressures from society, their roles in society, and what aspects of society they may personally reject; they also talk about loneliness and true friends, and debate whether friends made through drug use are lasting or simply formed out of convenience.

Appendixes to the guides contain many sources of information for the teacher. Scientific and slang terminologies are defined; addiction potentials of legal and illegal drugs are given; civil and criminal laws, both State and national, are explained; and State and local school policies on drug use are spelled out. Audiovisual and printed resources available through the district's resource center are listed. There is also a section dealing with "basic information" about drug abuse, which answers such commonly asked questions as "Can LSD damage chromosomes?" and "Is there anything in marijuana that leads to the use of other drugs?" The committee members answered these and other questions honestly and factually; when insufficient research exists they say so and inferences are avoided.

The committee field tested the guide in the spring of 1970. A relatively small group was selected for the test, because the committee wanted a small corps of teachers that could work together when revisions were needed. Five elementary schools were strategically selected and two classes per grade or 12 classes per school participated. One junior high and one senior high school used the guide. In all, approximately 5,300 students and 210 teachers took part in the evaluation.

The committee worked with the field test teachers at six different meetings before the guide actually went into the classroom. The test teachers saw all the films listed as resources in the guides, and reviewed with the respective writers those guides applicable to their grades. After using the guides the teachers revised and made them better. They became the new authors, adding and deleting where they felt changes needed to be made. The guide grew from a total of 440 pages to 540. When the summer of 1970 was over, the committee was confident the guide could go to the schools for the 1970–71 term.

Teacher Training

To introduce the guide districtwide, the committee scheduled a 1-day training session. Teachers were divided into groups by levels (Level I: K-3; Level II: 4-6, etc.); each group was led by those committee members and field test teachers who prepared the guides designed for that particular group. Outside resource people—such as police officers, pharmacists, physicians, and community leaders—also spoke. In addition to this preservice session, four sessions were scheduled by the committee during the school year. Certain schools also set up special inservice days for those teachers who desired additional training. Committee members attended these sessions and answered questions.

The committee that began back in 1969 is still open to change and trying to improve on past efforts. As new research is released and new methods of teaching decisionmaking and attitude skills are developed, the Laredo guide will be updated. Future plans include securing a commercial publisher for the guide. Requests for it have been received from all over the United States and even a few foreign countries. Until a publisher is obtained, however, copies cannot be supplied.

Selected Information on the 11 Drug Education Programs

Program name and location	Size of district served	Grade level(s)	Approach
CODAC's Teen Involvement Program Maricopa County, Ariz.	All Maricopa Co. (Phoenix, Glendale, and Scottsdale) parochial and public schools eligible for services.	5-8 10-12	Once a month high school students trained in pharmacology and communication skills go into grade schools to present information about drug abuse.
The Coronado Plan Coronado, Calif.	Primarily a Navy town, there is a permanent citizenry of 17,000. The school district serves 3,200 students.	K-12	Integrated into the existing curriculum, the Coronado Plan is a self-awareness program that teaches decisionmaking and problem-solving skills while providing facts about drugs.
Drug Abuse Reduction Through Education (DARTE) Wayne County, Michigan	Provides services for 700,000 students in 37 autonomous school districts, Detroit being the largest.	K-12	A multifaceted training program using clarification, empathy training, and decisionmaking skill development over pharmacology.
Drug Abuse Educational Program Seymour, Conn.	High school, in a town of 10,000, has an enrollment of 1,200 students.	9-12	Program, largely developed by students, features small group, sensitivity-type sessions.
Drug Education Program Duluth, Minn.	City has a population of 100,000; 23,000 students enrolled in public schools.	K-12	Program stresses personal growth, humanizing the schools and sensitizing teachers to student needs. Pharmacology not emphasized.
Gallatin Council on Health and Drugs—Bozeman Board of Instruction Drug Education Program Bozeman, Mont.	Bozeman, county seat of Gallatin Co., has 26,000 citizens, with 4,400 students enrolled in the public schools.	Jr. and sr. high school, adult, and community education.	Involves all elements of the community; focuses on humanizing the schools and community and providing counseling and referral services.
Parkway Drug Education Program Parkway, Mo.	Suburban St. Louis Co.; school enrollment of 21,000.	K-12	Features value and decision-making development.
Programmed Learning Units in Drug Education (PLUDRUG) Milwaukee, Wis.	Used in selected high schools in Milwaukee; adaptable for smaller districts.	Jr. and sr. high school, adult, and community education.	Computer-assisted instruction stressing decisionmaking, role playing, and simulation games. Can be used in guidance and counseling.
Project PRIDE (Professional Resources in Drug Education) Dade County, Fla.	Co. population of over 300,000; 235 schools separated into six districts.	K-12	All 11,000 teachers in Co. trained in drug education. Emphasis on communication skills, student-teacher interaction, and training.
Regional Community Services Program State of Oreg.	All school districts in State are eligible for services.	K-12, adult and community education.	A comprehensive system for delivering services of a State agency to school districts and communities.
The Use, Misuse, and Abuse of Drugs and Narcotics Laredo, Tex.	Laredo has a population of 80,000; school district, an enrollment of 21,000.	K-12	Teachers integrate subject of drugs into existing subjects. Emphasis on attitudes, frustrations, and general problems of growing up.

Descriptive materials available	Curriculum materials available	Contact
Yes, from contact.	Free from contact teen involvement brochure describing program, sample training activities for counselors, and steps to follow in setting up a program.	Norman Hovda, Teen Involvement Program, CODAC, 719 North Third St., Phoenix, Ariz. 85004.
Yes, from contact.	A free copy of all district-prepared materials to any California school. A charge to any out-of-State school.	Marvin L. Bensley, Title III Project Director, Coronado Unified School District, 706 Sixth St., Coronado, California 92118.
Yes, from contact.	Limited sample copies available.	Leonard S. Demak, Wayne County intermediate School District, 1510 Kales Bldg., Detroit, Mich. 48226.
Limited supply of two monographs available from school district.	No	Peter J. Aiksnoras, Seymour Public Schools, Beecher Pl., 25 Maple St., Seymour, Conn. 06483.
Inquiries answered on an individual basis.	RUPS materials available from the Northwest Regional Educational Laboratory, 710 S.W. Second Ave., Portland, Oregon 97204.	Eugene Lynch or Don Soderberg, Duluth Public Schools, Duluth, Minn. 55802.
Inquiries answered on an individual basis.	No	Gaylord Lasher, Bozeman Board of Instruction, Box 520, Bozeman, Mont. 59715.
Inquiries answered on an individual basis.	Limited supply of curriculum guide.	Murray L. Tiffany, Parkway School District, 455 North Woods Mill Rd., Chesterfield, Mo. 63017.
Yes, from Dr. Russel Cassel, Professor of Educational Psychology, Univ. of Wis., Milwaukee, Wis. 53201.	None are commercially available, but Dr. Cassel is willing to consult with districts wishing to adopt program.	Al Thurner, Milwaukee Public Schools, P.O. Drawer 10-K, Milwaukee, Wis. 53201.
Yes, from contact.	Sample curriculum guides available free.	Robert F. Adams, Coordinator, PRIDE, Division of Instruction, Dade Co. Public Schools, 1410 N.E. Second Avenue, Miami, Fla. 33132.
Yes, from contact.	Sample materials available. Write contact for list.	George C. Demas, Mental Health Division, 309 S.W. Fourth Ave., Portland, Oreg. 97204.
Sample curriculum guide available on request from contact.	No negotiations underway for commercial publication.	Graciela C. Ramirez, Curriculum Evaluator of Federal Projects, 1618 Houston, Laredo, Tex. 78040.

Product Reports

The six products reviewed here were selected on the basis of criteria developed at the Far West Laboratory for Educational Research and Development. The purpose was to identify and report on major commercial drug education programs which include innovative features and have been tested or proven. Some specialized standards were applied in the selection process. For example, attention was given to the extent to which each product included information consistent with current scientific knowledge.

The project staff does not believe that any one of the six products will, by itself, meet the needs of a school district in dealing with drug abuse-related problems. A complete program adapted to specific local needs is much more likely to provide an effective way of dealing with the complex problems in this field. However, the products described here should be considered as supplements which may prove useful as component parts of such a comprehensive local approach.

Other commercial products were considered but not included for one or more of a variety of reasons: some were not widely known or distributed; others were considered too narrow in scope; still others were too recently developed to be adequately evaluated. Exclusion of these products, however, does not constitute a condemnation, nor does inclusion of the six products constitute endorsement.

A list of some other commercial products available but not reported on follows:

1. A series of nine booklets—three for each level, elementary, junior high, and senior high—titled: *You and Narcotics, You and Smoking,* and *You and Alcohol.*
   Publisher: Ramapo House
   235 East 45th Street
   New York, N.Y. 10017
2. Drugs and You
   Robert J. Brady Company
   130 Que Street, NE
   Washington, D.C. 20002
   (K-6)
3. SCOPE's Drug Abuse Program
   International Education & Training, Inc.
   1776 New Highway
   Farmingdale, N.Y. 11735
   (K-12)
4. Drug Education Resources (a teacher training program)
   Educational Resources, Inc.
   47 W. 13th Street
   New York, N.Y. 10011
5. Youth Turns On
   Center for Mass Communication of Columbia University Press
   440 West 11th Street
   New York, N.Y. 10025
6. Drug Prevention Series
   New Dimensions Publishing Company, Inc.
   151 W. 25th St.
   New York, N.Y. 10001
7. Drug Education Materials
   Do It Now Foundation
   P.O. Box 4573
   Hollywood, Calif. 90028
   (Grades 8-12)
8. The Choice Is Yours
   Education Progress Corporation
   P.O. Box 99302-Station O
   San Francisco, Calif . 94109
   (Grades 5-12)
9. Drugs: Let's Get Hip Kit
   Tane Press
   2814 Oak Lawn
   Dallas, Tex. 75219
   (Grades 7-9)
10. Smart Set, Inc.
    1600 N. Vine Street
    Hollywood, Calif. 90028
11. DCA Educational Products, Inc.
    Drug Education Materials
    4865 Stenton Avenue
    Philadelphia, Pa. 19144
    (K-12)
12. Raytheon Learning Systems Drug Education Program
    Raytheon Education Company
    475 S. Dean Street
    Englewood, N.J. 07631

Product Report

The Creative Learning Group Drug Education Program

Developer	The Creative Learning Group, 145 Portland Street, Cambridge, Mass.
Distributor	Same
Grade Level	K-6 and 7-9
Content Focus	The causes and consequences of misusing drugs, with emphasis on personality development
Program Use	Considered by developers as a complete drug education program; may be used as supplement in total drug education efforts
Availability	Available since September 1970
Cost	Grades K-6: all materials plus multimedia package for 30 students per grade, $319; grades 7-9: basic instruction package for 30 students, $219.

Target Audience

The Creative Learning Group Drug Education Program consists of two curriculums: one for elementary students in grades K6, and one for junior high students in grades 7–9.

The elementary materials can be used with children of varying levels of reading ability. The booklets are not numbered, and no indication of grade level appears on the materials.

The junior high materials are designed for students with average reading abilities, and have also been used in grades 6 and 10.

Program Development

Several young persons, all under 30, were concerned with the growing drug problem and the lack of accurate and relevant educational materials. Believing that the need for good drug education materials was urgent, the group, known as the Creative Learning Group, began in early 1970 to put together a program. A team of psychologists, educators, pharmacologists and young people with drug experiences was consulted and helped develop the program materials. The entire program was developed in 6 months without the benefit of funding from an outside foundation or Federal agency.

Goals and Objectives

Under the assumption that the fundamental goal of education is to "provoke and satisfy curiosity," the developers contend that interest in drugs begins with a person's basic curiosity about what using drugs would be like. They believe that this initial curiosity can be satisfied if it is met with understanding and honest explanation. Therefore, they urge teachers to do more than make students learn drug vocabulary and pharmaceutical facts, seeing the teacher's main objective as "encouraging and guiding the development of the child's decision-making ability so that he can deal with his society and the drugs available within it."

Materials: Elementary Program

The elementary program begins with a 16-page coloring book, *Sick and Well*, designed for kindergarten students. The book features 12 pages of drawings to be colored, and four blank pages for students to creatively draw on. There are four stories that stress the appropriate uses of certain drugs, such as cold medicines, and that emphasize the need for adult supervision. The concepts covered in the four stories are:

- Do not go into the medicine cabinet yourself
- Do not eat unknown plants or berries
- Medicines are good for you if you are sick
- Do not take candy or pills from strangers

Children are encouraged to take their coloring books home and have their parents reread them the stories, thereby reinforcing what they learned in school.

The booklets for grades 1-6 stress three aspects of drug use:

Drugs and You, Books I and II, focuses on common drugs and their usage
Drugs in the Home, Books I and II, focuses on drugs found within the home environment
Drugs in the Community, Books I and II, examines the ways drugs are used in American society and explains drug laws

All of the booklets contain black and white photographs of "average"-looking, multiracial kids. Facts about drugs are interspersed with stories about children, their friends, and their families.

The grade 1 booklet, *Drugs and You—1*, has four stories that develop the following concepts:

- People take some drugs when they are sick, other drugs when they are healthy
- Children should not take drugs from anyone but a reliable older person
- Tobacco smoking can lead to the development of lung cancer
- Alcohol, if abused, can cause an individual to become sick

All of these stories use the family as the frame of reference. For example, the story stressing the second concept tells about Gloria who sees a green pill on the table. Gloria does not know if it is a vitamin pill or a cold pill. The students are asked to write a story about what Gloria should do and illustrate it with their own pictures.

Drugs in the Home—1, appropriate for students in grade 2, discusses such drugs as cold medicines, coffee, tobacco, and alcohol, their use and what they can do to the body.

Drugs in the Community—I, designed for grade 3, focuses on laws relating to drugs and how to read a label. The main story is about Karen, who has an allergy and goes to a physician for a prescription. She then goes to the druggist who explains various drugs and talks with her about dosages and the laws regulating such drugs as marijuana, alcohol, and tobacco.

How drug taking may be related to emotions is discussed in *Drugs and You—II*, designed for children in grade 4. The major questions discussed in this booklet are: "What is an emotion?" "How do people react to their own emotions?" and "What is depression and how does a person deal with it?" The idea that emotions change and that this is perfectly natural is especially emphasized. Children read that people are not always happy but that no one should be consistently sad. Amphetamines, barbiturates, and alcohol are discussed in terms of using these drugs to relieve certain emotions. Misuse is also discussed, and the problems of withdrawal and alcoholism are introduced. Marijuana is presented as a drug that many people use to help them forget their problems. Children are told that this drug will only make the problem go away for a short while and that it will not solve anything.

Drugs in the Home—II, for fifth graders, is a series of stories about use and misuse of various drugs. The stories all deal with drugs found both in and outside the home, and with the effects of drug abuse on family life. For example, one story deals with Jennifer, a girl with a very bad cough. Jennifer's mother takes her to a doctor who prescribes a medicine with codeine in it. While discussing codeine with the doctor, Jennifer learns about other narcotics, tolerance levels, and withdrawal. Another story is about the son of an alcoholic and the effects alcoholism can have on the family. The son quits school to earn money for clothes and eventually ends up addicted to heroin. The story ends with the boy in a state methadone treatment center attending group therapy sessions. Discussion questions for this story include, "What do you think Robert (the son) will say in his group session?" "Why did he start taking heroin?" and "Did heroin help solve his problems?"

The final booklet, *Drugs in the Community —II*, for sixth graders, deals with addiction, dependence, tolerance, and withdrawal. Drugs are discussed as stimulants and depressants, and the general similarities and differences of people under the influence of drugs are explained. The topic of illegal drugs is also emphasized. An interview with a director of a drug rehabilitation center and a social worker concludes the booklet. Classroom discussions focus on why people take drugs, what people can do to help people on drugs, and where people can go for help.

The teacher's manual for the six booklets

contains complete lesson plans for each booklet. Discussion questions for each story or section are provided along with numerous suggested projects. Many of these projects are role playing situations designed to encourage the children to discuss alternative responses to various incidents. All of the suggested activities and discussion questions emphasize student-directed discussions where students can discuss freely their thought about drugs.

The Multi-Sensory Learning Kit, an optional part of the elementary program, is designed to augment the student booklets. The kit contains six parts:

1. 208" by 8" flash cards that can be used as "triggers" to discussions about how children view the world around them and to start children talking about emotions.
2. 30 spirit masters that pose problems concerning emotions and drugs. Ten masters contain letters to a fictitious adviser, "Dear Kathy." These are about particular problems with a family friend or member. In one, a girl writes about her sister who has been acting funny and is suspected of using drugs. She asks Kathy what to do. Each student then acts as the adviser and compares solutions. A second set of masters is a series of unfinished stories that students complete by writing their own endings. Discussions show various viewpoints and ways of handling the situation. The third group of masters is a set of 10 fictitious patent medicine ads similar to those seen on television and in magazines. These are designed to start discussions about the validity of claims made by drug advertisers.
3. A smoking machine that is used in all grades to illustrate the amount and nature of the tars and nicotine produced by cigarettes. Kids compare filtered and unfiltered cigarettes, brands, etc.
4. A filmstrip and cassette titled "What Would You Do?" designed to help students develop decisionmaking skills.
5. Eight cassette interviews with young people and adults about drug-related experiences. In one, two kids talk about glue sniffing; in another, a 14-year-old girl talks about how she started smoking when she was 11 and her efforts to quit.
6. Word games that are designed to reinforce understanding and use of technical terms introduced in the course. These are crossword puzzles and word scrambles using drug vocabulary.

Materials: Junior High Program

In the junior high program, taped cassettes, slides, and booklets are provided for use with students.

Each student is provided with his own set of 10 short booklets titled:

1. *What is a Drug?*
2. *Legal Stimulants (Caffeine, Nicotine)*
3. *Prescription Stimulants (Amphetamines, Cocaine)*
4. *Hallucinogens (LSD, Mescaline, Psilocybin, DMT, MDA, STP, etc.)*
5. *Marijuana*
6. *Alcohol*
7. *Depressants (Barbiturates, Tranquilizers, Solvents)*
8. *Narcotics (Opium, Morphine, Codeine, Synthetics)*
9. *Heroin*
10. *Drug Dependency*

The texts are designed to be "homework" booklets so that classtime can be devoted to discussion. With the exception of the first and last booklets, the student texts follow the same format: introduction, programed text, case interview(s), and summary.

In the introduction, the history of the drug is presented. The programed texts present basic scientific and medical knowledge, and information on the preparation, appearance, manner of use, and general physical and mental effects of the drug.

The printed case interviews present information from someone who "knows" about the drug. They are written in a colloquial style, using drug slang. The people interviewed have both good and bad things to say about drugs. Questions following each interview point out where the "user" views might not agree with medical facts known about the drugs. This helps to develop "critical thinking." Students have the opportunity to compare the testimony of users with the accurate information in the programed text. The summary pulls together

information from the programed text and the interviews, and points out some of the reasons that people who didn't know better, or who were trying to forget or escape their own problems, became heavily involved with drug usage. Student projects are also suggested. For example:

Write a brief text to explain marijuana to someone 3 years younger than yourself.

Write a law which declares marijuana illegal, limits its use, or which legalizes it. Include your reasons.

The booklet *What is a Drug?* serves as an introduction to the historical use of drugs, their diversity, and their general effects on the body.

The last booklet, *Drug Dependency*, contains an introduction and two brief sections on definitions and patterns of dependence. Synanon-style group therapy and methadone maintenance, two approaches to rehabilitation, are also discussed.

Additional materials include a set of 25 color slides showing examples of the various kinds of drugs and the instruments used to inject the drugs into the body, 12 *Scientific American* reprints on drugs, and a *Time-Life* book on *Drugs and the Young*.

A series of 12 interviews recorded on cassettes (6-25 minutes) are also provided. The tapes include: *Two "Speed Freaks," LSD Interview, Convicted Marijuana Dealer, Marijuana Dealer Interview, Former Heroin Addict Statement, Heroin Addict Interview, A Father Talks About Drugs, A Mother Talks About Drugs, A Lawyer Talks About Drugs, A District Attorney Views Drugs, A Police Captain Talks About* Drugs, and *A Police Lieutenant Talks About Drugs*.

The "user" interviews are primarily with teenagers who discuss their experiences while on drugs, their reasons for using drugs, and their present feelings.

A comprehensive teacher's manual discusses how to use the materials in the classroom and how to use the taped interviews to initiate and conduct discussion. Teachers are urged to remember their role as moderator, not lecturer, and to treat the materials flexibly to adapt them to the mood and needs of the class.

The manual summarizes the major points in each of the 10 student manuals and the taped interviews. A suggested lesson plan is also provided, as well as a glossary and selected bibliography of currently available works. In addition, a section called "What to do Until the Doctor Arrives" informs teachers how to deal with possible classroom emergencies relating to drug abuse. Thirty copies of the *Drug Knowledge Inventory* prepared by Family Life Publications are included for pre- and posttesting at the teacher's option.

Teaching/Learning Strategy

Both elementary and junior high program materials are designed to provoke a creative exchange of ideas among students, thus lecturing to the students is discouraged. The strategy is to involve the students in questioning and challenging each other and in thinking about what drugs mean in their world. By discussing emotions and how to cope with them, the developers hope to lead children to realize that drugs will compound rather than solve problems. The developers do not state that students should demonstrate certain attitudes toward drugs at the close of the course. They feel that, while the immediate results of the teacher's efforts will probably not be obvious, teachers will still be contributing to the maturity and responsibility of their students. The developers further believe that if the materials are presented in an open classroom where students can discuss drug use realistically and get honest answers to their questions, the students will make reasoned and mature decisions concerning personal abuse of illegal drugs.

Student Assessment

The Drug Knowledge Inventory, developed by Family Life Publications, Inc., is provided to measure student knowledge. Questions concentrate on the pharmacological aspects of drugs. Although the test is provided, the developers feel that the most important goal of drug abuse education is attitudinal guidance rather than factual information, which is difficult to assess.

Community Involvement

No allowances have been made for involving parents in the planning and execution of this course. However, two of the taped cassettes in

both the elementary and the junior high program are particularly suitable for parents, and several projects involving researching community agencies or interacting with parents are suggested in the teacher's manual.

Personnel Requirements and Training

For the junior high program, the Creative Learning staff will provide training without charge if the program is purchased on a districtwide basis. There is no other provision made for teacher training.

The following chart details the cost of implementing the programs:

Evaluation

Because of financial restrictions, evaluations of the program were conducted on a small scale. Students using the materials during spring 1971 were requested to complete evaluation forms. Responses from more than a third were favorable. A total of 91 percent of the junior high students in one district sampled responded that they thought the materials were interesting, easy to follow, and stimulating. Changes were made in the materials where responses indicated improvement was needed. No evaluation has been conducted on the elementary materials.

Required items	Quantity needed	Cost per item	Replacement rate
Elementary Program			
Basic instructional package for single grade: 30 student books 1 teacher's manual 1 Multi-Sensory Learning Package	1 per grade	$125	Reusable.
Basic instructional package for grades K-6: 30 student books per grade 6 teacher's manuals 1 Multi-Sensory Learning Package	1 per school	$319	Reusable.
Junior High Program			
Basic instructional package: 1 teacher's manual 6 cassettes 25 slides 12 *Scientific American* reprints 1 *Time-Life* book 30 sets of student booklets plus answer shields (10 booklets per set)	1 per school	$219	Students booklets are consumable; costs of additional sets range from $3-$2 depending on quantity. Cassettes are guaranteed 5 years.

Note.—Elementary program materials may be purchased separately: student books—$1.20; teacher's manual—$2.95; Multi-Sensory Learning Package—$95.

Product Report

Drug Education Program Or Drug Abuse Decision System (DADs)

Program Name	Drug Education Program (also known as the San Mateo Drug Education Program)
Developer	San Mateo Union High School District, San Mateo, California
Distributor	Professional Arts, Inc., P.O. Box 8484, Universal City, Calif. 91608
Grade Level	9th-12th grades; reading level: 6th and 7th grade
Content Focus	Pharmacology
Program Use	Considered by developers as a complete drug education program; may be used as a supplement in total drug education efforts.
Available	Available since 1970
Cost	Materials for 30 students, $33.50; film rentals, $55.

Target Audience

A multimedia drug education program designed for students of all ability levels in grades 9–12.

Program Development

During the school year 1966–67 the growing drug abuse problem in the San Francisco Peninsula communities led the Board of Trustees to recommend the making of a 16 mm. black and white film on drugs. The San Mateo Union High School District's Know and Care Educational Resources Center and representatives of local health and law enforcement agencies put together the film, which was subsequently field tested and rejected by district students. When the school year 1967-68 opened in the fall, the increase in drug-related arrests prompted the school district to reexamine its efforts in the drug education field. A reference manual for teachers was prepared, a color film *LSD-25* produced, and drug information workshops held for teachers. The following year the San Mateo Schools again reexamined their drug education program. It was discovered that there was not only an increase in the use of drugs among students, but that students were complaining of a lack of information about drug use. In the spring of 1968 work was begun on a complete drug abuse education package of teacher's guides, materials for students and parents, and films and records. Profits from *LSD-25* enabled the school district and Professional Arts, Inc., to develop the second 16 mm. film, *Escape to Nowhere*. After the initial draft of the written materials was completed, consultants in drug education and officials from both the Federal and State Bureaus of Narcotics reviewed the materials and helped develop the recorded episodes. A professional writer was hired to revise and prepare the materials for final form. This package of materials was pilot tested during the summer of 1970 in driver education classes in the San Mateo schools. In fall 1970, Professional Arts, Inc., began to publish the materials commercially under the name School Drug Education Program. The title Drug Abuse Decision System (or DADS) was given to the materials in the spring of 1971. Since commercial publication, all 10th-grade safety education classes in the San Mateo Unified School District use the program.

Goals and Objectives

The course was designed to develop individuals who will "maintain good physical and mental health." The materials present factual information about drug abuse that will enable students to "demonstrate responsibility for healthful living and to better comprehend the dangers of drugs." For this reason the program materi-

als focus on the pharmaceutical knowledge of the effects of drugs on the human body. The developers of the materials believe that, once the known and undisputed facts about drugs are presented to students, certain attitudes, such as "drugs can harm one for life," will be formed and that ultimately students will make the decision to reject drug use.

The unit is a complete drug program in that no additional materials are specifically required. About 15 class periods are needed to teach the program. The developers, however, caution that this is the "bare bones" approach. They suggest lengthening the program by bringing in guest speakers from the community, creating student panels on drug problems, or presenting other activities that reflect student interests and attitudes.

Materials

The program materials consist of six parts: (1) a student handbook, (2) a pretest and posttest, (3) two 16 mm films, (4) five recorded "episodes" of experiences with drugs, (5) a home drug test for parents, and (6) a teacher's handbook. These materials may be purchased as a package or as separate supplements to an existing drug curriculum.

The student handbook is an 81-page booklet designed to give essential facts about dangerous drugs and narcotics. These facts are written in brief sections of one or two pages each and are followed by multiple-choice questions which students answer in their books. To give an indication of the content, the titles of these sections are:

Effects of Drugs on the Body
Dependence on Drugs
Amphetamines
Barbiturates
LSD
Marijuana
Cocaine
Opium and Opium Products
Morphine
Heroin
Codeine
Why People Misuse Drugs
Drug Laws

The coverage in these sections varies; however, each section dealing with a particular drug discusses the effects of that drug and the possible drug dependencies, physical and emotional, that can result from misuse.

"Why People Misuse Drugs" and "Drug Laws" deal with the attitudes and personality problems of users, and mentions major drug legislation in the United States. The section "Drug Laws" ends with a chart, "Present Penalties for Violating Certain Drug Laws," which lists the possible drug violations (sale of narcotics, sale of marijuana, possession of dangerous drugs, etc.) and tells the maximum fine, prison sentence, and the chances for suspended sentence, probation, or parole for first and second convictions.

The pretest and posttest for students consist of 60 multiple-choice questions. Many of the questions are slight variations of those found in the student handbook. All odd-numbered items are usually given at the beginning of the program as a pretest, and all even-numbered items are given as a posttest at the conclusion of the course. The answers to the test questions are found in the teacher's handbook.

The two 16 mm. color films are *Escape to Nowhere* (25 minutes), produced in 1968, and *LSD-25* (27 minutes), produced in 1967. *Escape to Nowhere,* termed by developers as a "mood" film, is the story of a 16-year-old named Debbie. The camera follows Debbie as she hitchhikes to parks, zoos, museums, and beaches. She talks with a narrator and describes her attitudes and feelings, and the role drugs play in her life. This film is designed to provoke discussion, stimulate questions from students, and, in the developer's words, "open communication channels between youth and adult." *LSD-25* is a "fact" film. It presents factual information on the chemical composition and potency of LSD, emphasizing the drug's unpredictability and unknown properties. Five records present five simulated episodes designed to reflect experiences in the lives of people who have been involved in drug use. Each episode is followed by an example of one way to handle the particular drug problem. Below is a brief description of one of the episodes and "sample" solution:

Episode. Two boys are driving Jenny

home from a carnival. The boys have been smoking marijuana, which Jenny refused to do. Speeding, the driver is stopped by a policeman who discovers four lids of marijuana in the glove compartment. What happens to the three teenagers now?

Sample Solution. A supervising agent for the California Bureau of Narcotic Enforcement discusses criminal proceedings with the driver's father. All three (including Jenny) will be fingerprinted. If no one person claims possession of the drugs, all three will be charged. Regardless of charges or subsequent convictions, all three will have permanent records.

After listening to each sample solution, the class members discuss how they personally would handle the same situation. The developers state that these episodes are excellent devices for provoking honest discussions and that often students express personal feelings and experiences that lead to further discussions about values and society.

The Home Drug Test for Parents is designed to give the student a chance to show parents at home what has been learned about drugs at school. The 12-minute test for parents, consisting of true-false questions, is on a vinyl phonograph record which is either given or loaned to the student to take home at the conclusion of the course. After parents take the test, the student corrects their answers. The developers believe that the test not only informs parents about drugs but also helps "kick off a healthy family discussion about drug problems."

The last of the materials, the 19-page teacher handbook, briefly describes the contents of the program, outlines the student handbook, and gives a suggested time schedule for the use of the materials. At the end of the manual is a "Guide to Pronunciation" chart that lists the correct pronunciation of names of various drugs.

Teaching/Learning Strategy

The developers believe that every teacher is different and will use the strategy that works best for him. The printed materials reflect an emphasis on teacher-directed learning. Students read the manuals, answer questions on what they have read, and then, either as a group or individually, check their answers with the suggested responses. The films and recorded episodes are designed to allow more student-to-student interaction and to provoke class discussion where students can freely speak their minds.

Student Evaluation

The 60-item pretest and posttest are used to check student knowledge about drugs. There is no other form of testing provided with the program.

Community Involvement

While there are no specific recommendations for community involvement included in the Drug Education Program, the community efforts of San Mateo County are worth noting. After development of the student program was completed, the San Mateo County Board of Supervisors adopted the "Phase V Program." This program consists of five separate services designed to respond to youth crises, including those which involve drugs. The five services are: (a) a 24-hour emergency service at a local hospital; (b) two Community Mental Health Centers; (c) two 24-hour switchboards, usually manned by people previously involved with drugs; (d) a drop-in center; and (e) a community educational, informational, and consultation services office. Students in the San Mateo School District are informed of Phase V and encouraged to use its services. The school district has also initiated an adult education class on drugs which is offered to the community as an 8-week course, meeting 2 hours per week. Consultants and school personnel directly involved with the program have spoken to numerous community groups on the Drug Education Program and on drug abuse in the community. The Home Drug Test for Parents is another example of an attempt to involve the community in the schools' effort to combat the use of drugs among students. The developers report that parental interest in the schools' drug program and in the problems of the youth of the

community has increased as a result of the short take-home test.

Personnel Requirements and Training

Any certificated teacher may teach the program. No special aides or school nurses are required. The decision as to which teachers will conduct the course is left to the adopting school.

There is no formal training program. One of the program's goals is to design materials that can be used without difficulty by every teacher. Adopting schools will have to assess their teachers' knowledge of drugs and decide for themselves whether or not additional training is required. San Mateo, for example, provides a 10-hour preservice workshop for all teachers using the program. Staff from the San Mateo district who are trained in drug education and in the use of the program are available on a consulting basis. Schools interested in such a service should contact Dr. Edward Walsh, Assistant Superintendent, San Mateo School District, 650 North Delaware Street, San Mateo, California 94401.

Cost

The following chart details the cost of implementing the Drug Education Program:

There are no special facilities or physical arrangements necessary for teaching the program. The audiovisual equipment requirements include: (a) one 16 mm. film projector, (b) one viewing screen, and (c) one 33⅓ rpm phonograph.

The San Mateo School District is currently collecting data on the influence of the DADS program on students within the district. The results of this survey will be available as soon as the analysis is completed.

In addition to the drug survey, the San Mateo schools are also collecting data on the pre- and post-tests to determine knowledge gains among students. This information is also not yet available.

Required items	Quantity needed	Cost per item	Replacement rate
Student Materials			
Student handbooks	1 per student	$0.50 each	Yearly
Teacher Materials			
Teacher handbook	1 per class	$1.00 each	Reusable
LSD-25	1 copy per school	$275.00 or	Reusable
Escape to Nowhere	1 copy per school	$27.50 rental	Reusable
You Take it From Here episodes	1 set per school	$275.00 or $27.50 rental	Reusable
Home Drug Test for Parents	1 per student	$7.00 $0.25 each	Yearly*
Pretest/Posttest	1 per student	$0.10 each	Yearly

*Following the initial purchase at 25 cents each, the vinyl records can be loaned to parents to reduce costs in subsequent years.

Product Report

The Drug Experience: Data for Decisionmaking

Developer	David C. Lewis, M.D., Harvard Medical School, Boston, Mass.
Publisher and Distributor	Educational Resources, Inc., 27 West 13th Street, New York, N.Y. 10011
Grade Levels	7th and 8th grade; has also been used in grades 6 through 12
Content Focus	Pharmacology
Program Use	Considered by developer as a complete drug education program; may be used as supplement in total drug education efforts
Availability	Available since 1970
Cost	$249.50 for complete program material

Target Audience

Designed as a 7th and 8th grade drug education program, but it has been successfully used with 6th graders up to seniors in high school.

Goals and Objectives

David C. Lewis, M.D., a member of the Harvard Medical School faculty and the developer of the program, believes that, since decisions about the use of drugs are made on an individual basis, an effective drug prevention program should help individuals make personal decisions about drug use. To this end, the program supplies factual information on the medical, social, ethical, and legal aspects of drugs along with tape-recorded personal accounts of drug users.

Both "soft" drugs, such as alcohol, and "hard" drugs, such as heroin, are examined in this program. Teaching units include:

- Cigarettes, Glue, and Other Inhalants
- Alcohol, Barbiturates, Tranquilizers
- Stimulants (Amphetamines, Caffein, Cocaine)
- Psychedelics (LSD, Marijuana, Mescaline, and Others)
- Opiates (Opium, Morphine, and Heroin)

For each of the drugs under study, the program supplies information on the definition of the drug, its effects on the body and the mind, reasons for using the drug, how it is taken, addiction and dependence, the risks of taking it once, the risks of repeated use, laws regulating its sale and possession, and a history of its use.

Program materials include a teacher's guide, five student booklets, and four cassette tapes (eight sides).

The teacher's manual contains an explanation of the objectives of the program, suggestions for program use, pre- and post-tests on each of the five teaching units, and notes to the teacher for conducting discussion sessions.

Each of the five student booklets (40–50 pages each) contains findings from numerous medical, sociological, psychological studies. Information about each drug is organized around the following topics:

Description of the drug
Effects of the drug on the body and mind
Why people start drug use
How people start drug use
Drug addiction and dependence
Risks of taking the drug once
Risks of repeated use
Laws regulating sale and possession of the drug
History of the use of the drug

Transcripts of tape recordings, with suggested questions for discussion, are included in the last section of each of the student booklets.

The student booklets are to be used in coordination with four cassette tapes. Tapes contain unrehearsed interviews with young people who have used the drug(s) under study. A student booklet and one side of a cassette tape

constitute an instructional unit. Each unit deals with one classification of drugs, such as stimulants.

Although the developers suggest allotting approximately 35 class periods for this program, teachers may shorten or lengthen the course. Each of the five instructional units may be taught in seven class periods. Suggestions on the breakdown of instructional units into class periods are provided.

Teaching/Learning Strategy

While the developers avoid specifying a required teaching strategy, the teacher's manual contains several suggestions on how the program can be taught.

- *Assess the level of student sophistication about drugs*
  It is suggested that teachers find out what students already know about drugs and present materials at the level of the class.
- *Involve students in planning*
  Students should decide the order in which they wish to study the five units of the program, and the emphasis given to topics within each unit.
- *Include the use of alcohol and cigarettes in a discussion of drug abuse*
  It is important that alcohol and cigarettes be included since these drugs are widely used ~~and data on~~ their effects are impressive.
- *Compare drug use and drug abuse*
  It is important to distinguish between proper therapeutic uses and indiscriminate uses of drugs. Point out that "drugs by themselves are not good or bad; what matters is the way in which they are used."
- *Do not sensationalize*
  The developers believe that sensationalizing drug abuse is the quickest way to turn off this generation of students.
- *Make drug education part of an ongoing classroom experience*
  Drug education should be taught by the classroom teacher as part of the educational program. The developers feel there is no need to rely on outside experts. "The materials, rather than the teacher, can be the source of factual information."
- *Include experimental data in the drug curriculum*
  The program includes experimental data from sociological, psychological, and medical studies and footnotes these studies so that students who wish to pursue more in-depth and independent study on the subject may do so.
- *Discuss the motivational factors that affect decisions to use drugs and the factors that inhibit their use*
  It is important to include the personal and social motivations that affect decisions to use drugs or to abstain from their use.
- *Include the comments of drug-experienced young people in the education process*
  Students will listen and react to what other young people have to say about drug use.

Student Assessment

The teacher's manual contains five 20-item pretests, one for each instructional unit. Each pretest is to be given prior to the introduction of a teaching unit to provide an index of entering students' level of knowledge about drugs and their attitudes toward them. The same test can be used again after the teaching unit has been completed. By comparing the pretest and the posttest scores, the teacher can obtain a measure of the effectiveness of the unit. Answers to questions on each of the five pretests are provided. The publisher also grants permission to reproduce the tests in quantity for educational use.

Personal Requirements and Training

The developers believe that the regular classroom teacher should be able to depend on factual information provided in the materials to implement the program successfully. It is considered unnecessary for teachers to be "experts," hence no special training for the teacher is provided either by the developer or the publisher. However, the publisher has consulting services available on request at the rate of $100 per day plus per diem and consulting expenses. The following chart lists costs for implementing the program:

Required items	Quantity needed	Cost per item	Replacement rate
Basic package 1 teacher's manual 4 cassette tapes 30 of each of the five student booklets	1 set per school	$249	Reusable

Since no teaching sequence is specified, all five units can be used simultaneously so that a maximum of 150 students can be served by one complete set of program materials.

Additional copies of materials may be obtained at the following rates:

Additional copy of teachers manual and four cassette tapes	$39.95
Additional set of materials for five students	$39.95

A review set (one teacher's manual, one copy of each of five student booklets and two cassette tapes) may be purchased for $24.95.

Evaluation

During its development stage, between October 1969 and May 1970 the program was tested by schools, church groups, adult education classes, and families in Philadelphia and the Boston area. A total of 400 subjects reviewed the program materials, and revisions of the material were made on the basis of their comments and criticism. However, no formal report of this evaluation effort was prepared.

Product Report

Drugs: Insights and Illusions

Developers	Dr. William Goodykoontz, editor, *Scholastic Scope* magazine, and others.
Distributor	Scholastic Book Services, 50 West 44th Street, New York, N.Y. 10036
Grade Level	All junior and senior high school students, but especially those who read at fourth- to sixth-grade levels or who are otherwise poorly motivated by conventional classroom materials and techniques.
Content Focus	The causes, consequences, and alternatives of drug use and abuse.
Program Use	Can be used either as a drug unit lasting from 8 to 16 weeks or integrated into the regular curriculum for a semester or a school year.
Availability	Available since March 1971.
Cost	$60 for complete materials for 35 students and one teacher.

Target Audience

Although designed for multilevel use in junior and senior high school with students of all abilities, the program developers feel the materials are especially effective with ninth- to twelfth-grade students who read at fourth- to sixth-grade levels. The developers believe that the course will also be effective with classes that are poorly motivated or "turned off" by conventional classroom activities and teaching techniques.

Program Development

In 1968, Scholastic Book Services began publishing what they call Contact Units. These units usually contained articles, plays, short stories, and activities that first appeared in the *Scholastic Scope* magazine. Packaged together, these materials were designed to be used in student-centered classrooms where teachers encourage students to be the decisionmakers. In January 1970, after several teachers familiar with earlier Contact units had urged the editors to produce a unit on drugs, work was begun on preparing one. Dr. William Goodykoontz, project editor, was assisted by two teaching consultants, drug education authorities.

Students in a California and a Florida high school provided the editors with detailed responses to the unit materials. Student responses were also obtained from the classrooms that subscribe to *Scholastic Scope* magazine, which reaches approximately 900,000 classrooms across the United States, the majority of them in inner-city schools.

After reviewing the responses from both students and consultants, the editors put together the finished unit, first printed in March 1971.

Goals and Objectives

Convinced that the scare approach to drug education doesn't work because such programs seem to make the decisions *for* the students, the editors of *Scholastic Scope* magazine decided to develop a program in which students are the decisionmakers. The editors teamed with consultants from the fields of reading and drug education and came up with a program that carries the theme "drugs are the sympton, not the cause" of the many problems that face youth and society today. Students are encouraged to think and speak out about what is happening to and around them.

The main objective of the program is "to challenge student audiences, again and again, to think about the many aspects of drug use and abuse—the causes, the consequences, the alternatives—and decide for themselves if they will use drugs." An additional purpose of the program is to help students develop the basic communication skills of reading, writing, speaking, and listening.

To achieve these goals the developers tried to present interesting information that is relevant to the lives of the students. Drug use and

abuse is viewed in two areas: the ghetto and the suburbs. No generalizations are made about either life style. The descriptions and narratives are designed to let each student examine the values of contrasting styles as well as his own attitudes.

Teachers can use the program in two ways: it may be taught as a drug unit that lasts from 8 to 16 weeks, or the materials can be used for only one or two times a week, stretching the length of use to a semester or an entire school year. The developers urge teachers to make the materials part of a continuing plan for drug education, but the ultimate decision of how to use the program is left up to the teacher.

Materials

The materials include a student anthology, a teacher's guide, a 55-minute record, eight posters, and student logbooks.

The anthology is composed of articles, stories, plays, involvement exercises, poetry, and black and white photographs, selected for their relevance to the drug abuse problem and for their interest to youth. The materials follow a logical progression. Students learn about what drugs do to people, what is being done to curb drug abuse, and what—if anything—they may do to improve the situation.

The anthology is divided into three sections. The first, "How Much do you Know About Drugs?", explains what drugs are, what scientists say about drugs, facts and fictions about drugs, legal facts, and why people become dependent on drugs. "The Drug Scene," the second section, concentrates on the use and abuse of drugs in the ghettos and the suburbs. The anthology points out that these selections are not intended to give a complete view of either life style, but are presented to help students get a broader view of issues involved in both areas. Issues explored in the selections focusing on the ghetto include the link between living conditions and drug misuse, the helplessness and joblessness of poor minority groups, the failure of American institutions to assure equal rights, and the determination of minorities to receive equal treatment. A play, *The People Next Door*, concerns drug abuse in an affluent middle-class suburb and enables students to examine the conflict in values between adults and their children, the influence of materialistic goals, the inability to live up to professed standards, and the growing indifference among the wealthy young.

The third section, "What Should be Done?", deals with proposed solutions to the problem of drug abuse. It examines what science, government, education, and rehabilitation treatment centers are doing. Students learn what other young people are doing in schools and in their communities around the United States. The last section asks students to think about, discuss, and practice ways of turning on without artificial stimulants. For example, a teacher may demonstrate yoga breathing exercises and discuss why people turn to meditation. A class may listen to popular music and react in whatever manner they wish. Long-term activities, such as the formation of community groups, and an introduction to various hobbies are also discussed and presented to students as options.

The program is designed for classrooms where teachers let the students do most of the talking and practically all of the decisionmaking. A 190-page teacher's guide offers suggestions for ways to involve students in activities that will interest and help them to participate in the program. In the guide are an explanation of each selection and a rationale for its inclusion in the program. Most of the selections are explained in three parts: motivation, procedure, and followup. In the motivation section the teacher finds useful discussion openers that introduce each of the selections. The procedure section tells the teacher what steps to follow in presenting the selection. For example, the teacher can divide the students into small groups in which students who have trouble reading can be paired with strong readers. The followup sections suggest ideas for bulletin boards, role-playing activities, debates, panels, writing activities, and many other student-oriented tasks.

Especially helpful to the teacher are the additional information sections in the guide which contain a variety of information relevant to the course, including quotations from consultants, professors, and published works; reprints from magazines and books; reports of scientific studies and experiments; and comments about what other students and communities are doing to combat drug abuse.

The 55-minute record is intended to supplement the program materials. The developers hope that, after listening carefully to the young people on the record, students will be stimulated to communicate their feelings about drugs to the class and will gain additional insight into why some people turn to drugs. The voices heard on the record are mostly young people, some still in school and some in drug treatment centers and rehabilitation clinics. Also featured are a doctor who specializes in drug related problems, an exaddict who started a neighborhood treatment center, and a former legislator, now a judge, who questions the drug laws he once voted for. The teacher's guide contains suggestions for discussion questions for each of the 12 record selections.

The eight classroom posters are used as points of discussion and interpretation. Quotations dealing with drugs, youth, and society appear on many of the posters. Students are also encouraged to design their own posters or collages to reflect the various topics in the program.

The student logbooks contain a number of suggestions for activities that are either specifically linked to some anthology selection or designed to encourage student participation and help teach additional implications of drug misuse. Many role-playing activities are suggested. In one, students act out what they would do if they spotted a pusher at work. There are also open-ended plays that students complete by acting out what they would have done had they been one of the characters. The developers emphasize that the activities in the logbooks should be regarded as "opportunities for self-expression rather than as workbook drills."

Teaching/Learning Strategy

In all the program materials, the emphasis is on student participation and student interest. Stressing an open classroom atmosphere where students are encouraged and allowed to express what they think and feel about drugs and society, the program is student-centered. The teacher is a guide and helper, not a lecturer or director. The activities vary—from facts about drugs to reflections about society and youth—so that there is less likelihood that students will be bored with hearing only drug facts. Student activities range from role playing to writing. In many activities they sit on panels, representing a certain view, and frequently they participate in small-group discussions. The program also emphasizes listening and observing, skills the developers think important when decisionmaking is involved.

Student Assessment

There are no pretests or posttests provided with the program materials. Because the developers see the activities as opportunities for self-expression, they do not feel the student's participation should be graded; therefore they suggest that teachers not grade the logbook. However, if teachers choose to do so, the developers recommend assessing students on the basis of overall effort instead of by single activities. The developers would like teachers to create an atmosphere of open communication and trust, where students can share their logbooks with others if they choose to do so.

Personnel Requirements and Training

The developers realize that the complaint "students know more about drugs than the teacher" is expressed in many classrooms. This is probably true, they concede, in areas where student experimentation is high. They offer no training program for teachers, but urge them to read and learn as much about drugs as possible. The sections in the teacher's guide labeled "Additional Information" direct teachers to resource materials. Also in the teacher's guide is a glossary of drug terms and slang words. An article in the guide entitled "Suggestions for Educators," a reprint from *Today's Education,* offers additional suggestions to teachers, such as avoiding the creation of an atmosphere of distrust and suspicion, avoiding panic and scare techniques, staying well-informed about drugs, and using drug education materials as a springboard to discussion.

The following chart shows the program cost:

Required items	Quantity needed	Cost per item	Replacement rate
Package			
35 softcover student anthologies	1 per class or school if shared	$60	Reusable
35 student logbooks			Yearly
1 teaching guide			Reusable
8 posters			Reusable
1 record			Reusable

Additional materials can be purchased at the following prices: anthologies, $1.50; logbooks, 30 cents; poster sets, $3.75; and records, $5.25.

Produce Report

Technicon Drug Decision Program

Program Name	Technicon Drug Decision (formerly known as Lockheed Drug Decision)
Developer	Lockheed Educational Systems
Distributor	Technicon Medical Information Systems Corporation, 590 E. Middlefield Rd., Mountain View, Calif. 94040
Grade Level	Grades 6-9
Content Focus	Main emphasis is on pharmacology and decisionmaking; does not include alcohol
Program Use	Considered by developers as a complete drug education curriculum; may be used as a supplement in total drug education efforts
Availability	Program has been available since 1970
Cost	Cost of program will depend on quantity of units ordered and frequency of use. Approximate cost is $4-$5 per student for first year and $1.50-$3 for subsequent years. Further details provided later in description.

Target Audience

The Technicon Drug Decision program is designed for students in grades 6–9.

Goals and Objectives

The major goal of the program is to assure that students develop a negative view of drug use based on sound knowledge rather than emotional appeals. The program developers expect that the immediate results of the program will be knowledge in four main areas: pharmacology; psychological needs that drive people to drugs; "the exploitive criminal greed that traffics in this special form of human misery"; and legal penalties for drug law violations. In terms of long-range results, the developers believe that once children are given the facts about drug abuse, they will be prepared to cope with "the pressures, the insecurity, the fads, and the frustrations" of teenage life.

Program Development

Program development began in 1968 at Lockheed Education Systems, Sunnyvale, Calif. The writing team employed classroom teachers, consultants in education and media, and medical and narcotics authorities to provide suggestions and information.

Until May 1971 the program was known as Lockheed Drug Decision. At this time the name was changed to Technicon Drug Decision, and distribution was taken over by Technicon Medical Information Systems Corporation. The Technicon staff made minor revisions based on feedback they received through a customer survey. Among these revisions were inclusion of a student workbook, simplified vocabulary so that the materials could be used at the sixth-grade level, and the consolidation of some of the shorter films on fewer reels so that teachers would not have to keep changing films.

Materials

The program contains 19 units, each lasting an average of 45 minutes. The number of class periods can be reduced by increasing the number of units per class session and can be stretched by covering less each period. An abbreviated form can be completed in 15 class sessions by eliminating four specified units. The teacher's manual contains a "Master Instructional Schedule" that lists the times needed for an average-fast seventh-grade class to complete each unit. Using this schedule as a reference, teachers can adjust the times to fit their particular class needs.

A multimedia programed approach is used because the developers feel that not all students learn equally well in a single sensory mode. For each major topic and unit students first complete a programed text section in their student manual and then view color cartoons and films designed to reinforce what they have just read. Student workbooks with answer sheets are provided so that the manuals can be reused. Because of this approach, teachers should follow the order designated in the teacher's manual. The 19 units are divided into five major phases:

Phase I, Disaster Management

The single unit in this phase presents the concept that the harmful effect of man-made disasters (car accidents, fires, etc.) can be minimized by understanding the nature of the disaster and by planning how to deal with t. By looking at pictures of natural and man-made disasters, students develop skills in observation, recording, evaluation, and decisionmaking. The unit ends with students being told they will soon be asked how they will deal with a "drug infiltration" disaster.

Phase II, Effects of Drugs on Man

Consisting of 10 units, this phase begins equipping students with the knowledge they need to become "effective drug-disaster managers." Here students learn the definition of drugs, where they come from, how they are abused, and what they can do to people, both mentally and physically. Medical and rehabilitation treatment facilities are covered. There are films and individual units on the following drugs: marijuana, LSD, amphetamines, barbiturates, and heroin. Volatile chemicals and cocaine each have only programed texts.

Phase III, Stopping Drug Abuse

This phase has one unit and is a general survey of the legal aspects of drug abuse. Federal drug laws are explained and teachers are encouraged to obtain local and State law information to present to students. The Drug Abuse Prevention and Control Act of 1970 is covered in detail along with penalties for violations.

Phase IV, Drug Attack Game

Phase IV begins with a film covering a day when a hypothetical community experiences a "drug attack." After the movie, the game is introduced. Student players assume roles of a law enforcement agent, a mayor, and a community health officer. Using their knowledge of drugs, these three people try to prevent a "drug disaster in their community." This can occur when community funds are no longer available to stop the "pushers," or if the community cannot treat its "drug victims."

Phase V, Rehabilitation

Phase V concludes the course and calls on students to use skills and knowledge developed throughout the program. Students first see a movie on rehabilitation centers and then prepare to role-play a similar situation. Student role assignments are left to the teacher; five roles exist: three rehabilitation center review board members, one rehabilitation counselor, and one resident (or addict). During this 4-day exercise, the review board must decide whether the resident should be released or kept for additional treatment. The counselor and the resident both have opportunities to give their reasons why the resident should be released. There are three case studies students role-play.

A manual provided for the teacher contains all of the text found in the student manual, explanatory material on the course, and six appendixes that provide background information and reference data concerning drug abuse and simulation strategies. Also featured are instructional objectives written in behavioral terms for each of the units. Guidelines and suggestions for discussions and followup activities are provided. One of the suggested followup activities involves setting up a "drug information center." This is suggested as a means of involving students in the collection of local drug abuse data that will provide them with knowledge of local conditions such as community resource people, legal information on State and local laws, and treatment information. Detailed instructions are provided in the manual for this activity, and references for obtaining drug-related information are given.

Teaching/Learning Strategy

Students read programed materials; view films; simulate decisionmaking roles in both the Drug Attack and Rehabilitation phases of the program; and observe, record, and evaluate data. In the simulation and gaming parts of the program the student actively participates in problem-solving. The developers intend this participation to help students make their own decisions about drug abuse so they will be able to intelligently argue their personal stands on issues concerning illegal drugs.

Student Evaluation

Pre- and post-knowledge tests are supplied. The test, consisting of 30 multiple choice questions, appears both in the student workbooks and in the teacher's manual. The teacher's manual contains the answer key.

Community Involvement

Feeling that parent involvement is critical to the success of the Technicon Drug Decision Program, the developers recommend that adopting schools hold a parents' meeting before the beginning of classroom instruction. A suggested agendum for this meeting is included in the teacher's manual. For example, school representatives may wish to talk to parents about the status of drug abuse in the community, describe how the program works in the classroom, explain gaming and role-playing activities, and finally show a 20-minute overview film that introduces the program and shows parts of the materials the students view and use. This is the same film that students view at the beginning of the course.

Developers also recommend that schools explain the drug information center concept, and encourage community organizations and service clubs to participate in the planning and use of the center.

Personnel Requirements and Training

Adopting schools must decide which teachers will use the Drug Decision materials. Aware that many teachers feel unsure about their knowledge in the drug education area, the Technicon developers offer a 1-day teacher training session with purchase of program materials. Technicon requires a minimum purchase of materials for 200 students in order to provide the free training session; for orders less than 200 the training program cost is $200. Technicon states, however, that arrangements can be made with nearby larger districts where training sessions are combined at no charge to either user.

Training is provided by Technicon staff. Audiovisual materials are shown and discussed, parentcommunity involvement suggestions are offered, and strategies and followup activities are explained. The session is given both before the parent meeting and the beginning of classroom instruction.

Cost

The following chart lists the costs of the Drug Decision materials:

Required items	Quantity needed	Cost per item	Replacement rate
Student manual	1 per student	$3.50	Reusable
Student workbook	1 per student	$1.50	Consumable
Teacher manual	1 per class	$5.00	Reusable
Game	3 per class	$6.00	Reusable
Films (13 reels)	1 set per 100 students	$500.00 per set or $1.00 per student rental*	

*The price of the Drug Decision program depends on the number of units ordered and the number of times the program is used. It is suggested that a Technicon representative be contacted for an accurate per-student cost estimate.

Program Evaluation

The Technicon staff hesitates to quote evaluation data because, they say, many of the early testing instruments were insufficient and testing procedures unsophisticated. The program is currently being used by schools throughout the United States in both urban and suburban settings, and most of the users report that the program has increased student knowledge about drugs and their effects.

Teacher's Guide to Resources in Drug Education

This resource guide will familiarize teachers with reviews, catalogs, resource handbooks, and compiled bibliographies on instructional aids and materials, curriculum ideas, and background information on drug education. It is by no means an exhaustive resource guide; however, it does include resource materials produced by major information sources in the area of drug education.

FILMS AND AUDIOVISUAL MATERIALS

Item	Source	Cost
Drug Abuse Prevention Materials for Schools (1971). Special Action Office for Drug Abuse Prevention catalog containing information on "The Social Seminar," a series of films and printed materials produced by the National Institute of Mental Health and the Office of Education, three grades, 4 items of instructional materials for minority groups, a list of State coordinators, and a list of State lending libraries for films and printed materials.	Superintendent of Documents U.S. Government Printing Office Washington, D.C. 20402	$0.50
Drug Abuse Films (second edition 1971). Handbook reviewing over 90 drug abuse films and audio-visual materials. Information on each of the AV pieces reviewed includes: production date, target audience, producer source, rental and purchase fees, film length, a short description of its content, and several paragraphs devoted to evaluation of the AV piece by a panel of experts. Some of the AV materials are recommended by the evaluators; others are considered "objectionable."	National Coordinating Council on Drug Education (formerly National Coordinating Council on Drug Abuse Education and Information, Inc.) 1211 Connecticut Ave., N.W. Suite 212 Washington, D.C. 20036	$2.00
99 Films on Drugs + (1970). Handbook reviewing over 99 films on drugs. Information on each of the films reviewed includes: production date, film length, distributor, intended audience, ratings by experts and young people from ages 14 to 20, a summary on its content, and an evaluation.	Educational Film Library Association 17 W. 60th Street New York, N.Y. 10023	$3.00

RESOURCE MATERIALS

Guidelines for Drug Abuse Prevention Education (1970). A 77-page handbook including background information, sample courses of study for kindergarten through 12th grade, and an appendix of charts, resource lists on literature, and audio-visual aids.	Bureau of Narcotics and Dangerous Drugs 1405 I Street, N.W Washington, D.C. 20537	Free (single copy)
Resource Book for Drug Abuse Education (1969). This 117-page handbook contains articles by national experts on the subjects of teaching about drugs, facts about drugs, supplementary reports on drugs, drug films, organizing a drug abuse education workshop, and selected references.	National Institute of Mental Health Superintendent of Documents U.S. Government Printing Office Washington, D.C. 20402	$1.25

Item	Source	Cost
A Federal Source Book: Answers to the Most Frequently Asked Questions About Drugs (1970). A 30-page booklet which provides answers to frequently asked questions about marijuana, hallucinogens, stimulants, sedatives, narcotics, and other drugs.	Superintendent of Documents U.S. Government Printing Office Washington, D.C. 20402	$0.25
Drug Identification Guide—a reprint from the "Physician's Best Reference"—contains actual size, color reproductions of the most commonly prescribed drugs as well as some available without prescription.	Medical Economics, Inc. 550 Kinderkamack Road Oradell, N.J. 07649	$2.50
Directory of Resource Materials on Alcohol and Drug Abuse. Catalog of 312 drug pamphlets and 311 alcohol pamphlets.	Tri-County Council on Addictive Diseases 201 South Street Harrisburg, Pa. 17101	$2.12
Guide to Drug Abuse Education and Information Materials (1971). A 20-page pamphlet describing materials produced by the National Institute of Mental Health on drug abuse education.	Public Documents Distribution Center 5801 Tabor Avenue Philadelphia, Pa. 19120	$0.20
Drug Crisis: Schools Fight Back with Innovative Programs (1971). A 64-page report which puts the problem in perspective, gives specifics of what is essential for a successful school drug abuse program, and describes the programs considered most successful. Tells how to establish an in-school policy of dealing with drug abuses, how parents can help, how to work with law enforcement personnel, what the Federal Drug Abuse Education Act provides.	National School Public Relations Association 1201 16th Street, N.W. Washington, D.C. 20036	$4.00
Publications of the National Clearinghouse for Drug Abuse Information and Public Health Service, HEW. *Volatile Substances: Some Questions and Answers* (1971) *Drug Abuse: Some Questions and Answers* (1971) *LSD: Some Questions and Answers* (1970) *Marihuana: Some Questions and Answers* (1970) *Narcotics: Some Questions and Answers* (1970) *Sedatives: Some Questions and Answers* (1970) *Stimulants: Some Questions and Answers* (1970) *Alcohol: Some Questions and Answers* (1971) *Cigarette Smoking: Some Questions and Answers* (1971)	Superintendent of Documents U.S. Government Printing Office Washington, D.C. 20402	$0.10 each

Item	Source	Cost
CURRICULUM GUIDES		
Teaching About Drugs—A Curriculum Guide, K-12 (1970) A 210-page curriculum guide for kindergarten through 12th grade; includes suggested curriculum, reference materials, teaching aids, and color illustrations.	American School Health Association P.O. Box 416 Kent, Ohio 44240	$4.00
Stamford Curriculum Guide for Drug Abuse Education (1971). A 4th- through 12th-grade curriculum guide, produced by the Stamford Public Schools, Stamford, Conn. 96 pages.	J. G. Ferguson Publishing Co. 6 North Michigan Avenue Chicago, Ill. 60602	$3.95
Selected Drug Education Curricula Series (1968). Publications of the National Clearinghouse for Drug Abuse Information, NIMH. A series of eight curriculum guides from the following school districts:	Superintendent of Documents U.S. Government Printing Office Washington, D.C. 20402	
Baltimore County Board of Education (grades 6, 9, 12)		$1.00
Flagstaff Public Schools (grades K-12)		$0.65
Great Falls School District No. 1 (grade 6)		$1.25
New York State Education Department (grades 4, 5, 6)		$0.65
Rhode Island Department of Education (grades K-12)		$1.25
San Francisco Unified School District (grades K-12)		$1.75
South Bay Union School District (grades K-12)		$1.25
Tacoma Public Schools (grades 6-12)		$0.60
GENERAL INFORMATION RESOURCES		
Grassroots. A subscription-based information service offering monthly supplements on 20 categories of information related to drugs.	National Coordinating Council on Drug Education 1211 Connecticut Ave., N.W. Suite 212 Washington, D.C. 20036	$95.00/year
Drug Education Report. A monthly newsletter on the latest development in drug abuse education, treatment and enforcement; includes reviews and recommendations of materials and programs.	National Coordinating Council on Drug Education 1211 Connecticut Ave., N.W. Washington, D.C. 20036	$18.00/year

Item	Source	Cost
Drugs and Drug Abuse Education Newsletter. A monthly publication on current development in drug education, laws, rehabilitation, and treatment.	Scope Publications, Inc. 1120 National Press Building Washington, D.C. 20004	$33/year

BIBLIOGRAPHIES

Drug Education Bibliography contains 44 pages of bibliography divided into subject areas of: history, sociocultural aspects, psychology, epidemiology, law and public policy, drug education, treatment and rehabilitation, community action, alcohol, stimulants, depressants, narcotics, hallucinogens, cannabis and derivatives, other drugs of abuse, and personal accounts and fiction.	National Coordinating Council on Drug Education 1211 Connecticut Ave., N.W. Suite 212 Washington, D.C. 20036	$5.00
ERIC Abstracts On: The Drug Problem and the Schools (1971). Produced by the ERIC Clearinghouse of Educational Management, an annotated bibliography of 36 references to documents available from ERIC; includes ERIC accession number and cost for each document.	American Association of School Administrators 1201 Sixteenth Street, N.W. Washington, D.C. 20036	$2.00
Drug Dependence and Abuse—A Selected Bibliography (1971). 50-pages of bibliography on 18 topics related to drugs, produced by the National Clearinghouse for Drug Abuse Information.	Superintendent of Documents U.S. Government Printing Office Washington, D.C. 20402	$0.60

IMPACT PLUS TWO and WHY?

Developer	Four unified California school districts in the Cerritos Junior College District: ABC, Bellflower, Downey, and Norwalk.
Distributor	Audio Visual Headquarters Corporation, 515 South Olive Street, Suite 1229, Los Angeles, California 90013
Grade Level	IMPACT PLUS TWO, Grades 5 and 6; WHY?, Grades 7 and 8.
Content Focus	IMPACT PLUS TWO: amphetamines, barbiturates, marijuana, and volatile substances. WHY?: stimulants, depressants, hallucinogens, volatiles and causes of abuse.
Program Use	Considered by developers as a complete drug education curriculum; may be used as supplement in total drug education efforts.
Availability	IMPACT PLUS TWO has been available since 1968; WHY?, since 1970.
Cost	Base cost is $3,550 for each program. This includes inservice teacher training, student and parent materials for 1,000. Maintenance costs 54 cents per student booklet and 25 cents per parent booklet.

Target Audience

IMPACT PLUS TWO is designed for fifth- and sixth-grade students and WHY? was developed for seventh and eighth graders. While WHY? reviews and expands the information presented in the elementary program, both can be purchased and used independently.

Goals and Objectives

The overall goal of both programs is to "help students develop attitudes and to acquire knowledge that will cause them to abstain from any form of drug abuse." By using a multimedia approach to drug education, the developers hope to "create maximum interest" and to "arm children with a sound basis upon which to make informed, constructive, and rational judgments regarding drug abuse."

Program Development

In 1967 the Cerritos California College Civic Responsibility Committee began formulating ideas for a drug education program for fifth- and sixth-grade students. The four unified school districts—ABC, Bellflower, Downey, and Norwalk—comprising the Cerritos College area pledged $5,000, and supplied professionals to develop the IMPACT PLUS TWO program. Assisting this Development Task Force Group, were consultants from the fields of child psychology, narcotics enforcement, curriculum development, and audiovisual production. Parents and teachers also supplied suggestions. The WHY? program was developed after IMPACT PLUS TWO and represents the same coordinated efforts of these four school districts.

Materials: Elementary

IMPACT PLUS TWO is divided into two parts: "Impact Day" during which students view a multimedia presentation designed to capture their attention and introduce them to factual information about drugs; and "Plus Two," the name given to the 2-week period of drug discussion in the classroom.

"Impact Day" begins with a short 20-minute triple-screen slide presentation. This is a visual technique featuring slides flashed rapidly back and forth between three screens. Music and lighting effects are periodically interjected to keep the presentation moving; in various

scenes a red police light flashes to emphasize the emergency that can be a result of drug abuse. Concepts presented are:

- Modern medical science provides trained doctors and laboratory-tested medicines and drugs to help us maintain our health.
- Marijuana has no medical value.
- Every substance taken into the body affects its condition and function.
- Properly used, many drugs are of great value.
- Many things people use are dangerous if misused.
- Experimenting with drugs is abuse and can be very dangerous.

Part II of "Impact Day" is optional but the developers suggest that schools include it: an 18-minute film entitled "Drugs and the Nervous System," (produced by Churchill Films, 662 N. Robertson Blvd., Los Angeles, California) which discusses glue-sniffing, stimulants, depressants, opium-derivatives, marijuana and LSD. Schools may either purchase or rent this film; it is not included in the materials provided. After the film is shown, students discuss questions they have and return to their classrooms for additional small-group discussions of what they have seen.

Part III begins after lunch. The students are divided into groups of 15 to discuss reaction cards passed out to them in the morning session. These cards present three hypothetical situations to the students and ask them to check answers that best describe how they would act. For instance, in one situation a stranger offers a funny looking cigarette; the reaction card asks what you would do with it—tell your parents? throw it away? try it? etc. Other situations deal with pills and glue-sniffing.

Part IV also uses role-playing, but asks students to act out additional situations instead of just checking what they would do. There are three situations in this exercise:

What Happens Next?—A new boy (girl) in the neighborhood is just starting to make friends, and one afternoon they ask him to sniff glue with them.

To Drag or Not To Drag—Your teenage brother's friends come over while your parents are out. They ask you to join them and start passing a homemade cigarette around. They tell you it will make you feel grown up. What should you do?

What Would You Do?—Joe was working on his model and friend Scott came over. Scott noticed the strong glue odor and told Joe if they took big sniffs of the glue they would feel weird.

"Plus Two" starts the day after "Impact Day." Each student is given a booklet, entitled "The Choice Is Yours," which discusses the physiological and legal ramifications of sniffing glue, pills, and marijuana. The booklet contains many short situational stories in which children, unhappy and depressed over school and parents, are tempted by friends to try drugs and how they cope with such feelings. Some characters in the stories choose drugs and some don't. Following each discussion of the three drugs, there are sections to help increase student understanding: "Important Facts to Remember"; "Check Your Vocabulary"; "Discussion Questions"; and a section called "Test Yourself" where students answer true and false questions on what they've learned. A glossary of drug terms is included at the end of the booklet.

Teachers are provided with a 79-page guide that contains background pharmaceutical information on drugs and additional classroom teaching suggestions. The student booklet is reprinted in the manual; and student worksheets, such as crossword puzzles and vocabulary word jumbles, are included.

The developers of the program suggest that 45 minutes to 1 hour be devoted to drug instruction and discussion for the 2-week period. At the conclusion of the 2 weeks, they further suggest that teachers review the student's progress and determine whether or not additional instruction is necessary.

Materials: Junior High

The emphasis in WHY? is on examining *why* people use drugs. The format of this program is almost identical to IMPACT PLUS TWO. On the first day of the program students view a 20-minute multiscreen slide presentation and complete unfinished stories which they use for role-playing activities, and the remaining 9 days are spent discussing student booklets, viewing films, and completing student assignments.

The multiscreen presentation uses the same musical and lighting effects found in IMPACT PLUS TWO; slides switch back and forth between scenes of surfing, playing ball, and many other activities where young people are obviously enjoying themselves. The main message in the presentation is: "Life is full of choices—some hurt, some are fun, and some are necessary—but only you can make the choices because it's your life."

After watching the production, students are given copies of two unfinished situational stories and asked to complete them. In one it is implied that two girls have taken some "reds." Two hours later an ambulance pulls up to the school and one of the girls is lifted onto the stretcher. A friend wonders if she's dead, hurt, or unconscious and asks herself, "Will she be okay?" The story ends by asking, "What do you think happens next?" In the second story a boy who has sniffed glue several times is asked by his younger brother if he may join him. The story asks, "What could happen next?"

On the second day of the drug unit, students bring their answers to the unfinished stories and receive copies of the student booklet, "Why." This booklet covers four main categories of drugs—stimulants, depressants, hallucinogens, and volatile chemicals—and such topics as pharmaceutical and legal information and drug dependence. The developers suggest that teachers use this booklet 1 hour a day for 1 week. After the booklet has been covered and reviewed, students are encouraged to devise their own role-playing situations. A film "Your Amazing Mind" (produced by Alfred Higgins Productions, 9100 Sunset Blvd., Los Angeles, California) is suggested. The film is available for purchase or rental and not included in the WHY? materials. To conclude the program, students are encouraged to make posters and displays and write a newspaper on the subject of drug abuse for the rest of the school.

The teacher's manual for WHY? contains background information on the drugs presented in the student booklet, discussion questions to use with the booklet, enrichment activities, resources, role-playing suggestions, and a glossary of slang terms.

Teaching/Learning Strategy

For both programs, all printed and video instruction is reinforced by classroom discussions. These discussions allow the students to air their questions and personal feelings about drug use. The developers caution teachers not to moralize but permit students to talk freely. While most of the discussions are initiated by the teacher, in some role-playing activities students themselves select topics and situations they wish to act out. Student worksheets and class reviews also help ensure student understanding.

Student Evaluation

No unit tests are provided for either program. In the IMPACT PLUS TWO manual for teachers, the developers suggest that at the conclusion of the program teachers audio or video tape the class review. They recommend using these tapes for evaluation and assessment of the need for further instruction. No additional suggestions for student testing are provided.

Community Involvement

Parent participation is encouraged through a parents' night where parents view the multiscreen presentation and receive an overview of the 2-week instructional unit. Booklets are also distributed to parents. The booklet for parents of elementary-age children, "Have The Kids Gone To Pot," presents facts on barbituates, amphetamines, sniffing, and marijuana. Symptoms of drug abuse and hints on how to identify users are also given. "Why?", the booklet for the junior high program, contains similar information and briefly describes opiates.

Personnel Requirements and Training

Personnel in adopting schools must decide which teachers will teach the program. Included in the purchase price of both programs are 13 hours of inservice instruction broken down in the following manner:

10 hours of teacher training: teachers review and discuss the overview, booklets, and teacher manual; receive 5 hours of narcotic instruction; and learn role-playing techniques and "student involvement training."

2 hours of audiovisual training during which school staff members are instructed in the use of the equipment used for both programs.

1 hour of administrative planning where principals, curriculum coordinators, etc. discuss where their school is going in terms of drug education, whether the program will be supplemental or the only drug program offered, and how parents should be involved.

Inservice training is conducted by trained staff of the Audio Visual Headquarters Corporation and by teachers from the four districts that wrote the program material.

Another training aid is a yearly conference held in southern California, where all schools using either program are invited to discuss improvements, exchange ideas, and recommend changes.

Costs:

Costs for each program are identical. The cost of implementing either program is listed in the chart below.

Required items	Quantity needed	Cost per item
Basic instructional package and training:	1 per 1,000 students	$3,550
13 hours of inservice training		
6 trays of slides (WHY? has 7)		
1 audio tape		
1 script		
1 programer memory tape		
1,000 student books		
1,000 parent books		
55 teacher guides		

The only replacement costs involve additional printed materials. The costs are: student books, 54 cents, parent books, 25 cents, and teacher guides, $3.95.

Adopting schools must pay for the transportation costs of the inservice training instructors and per diem costs if instructors must stay overnight.

Audiovisual equipment needed includes the following:

3 carousel projectors
3 8' tripod screens
1 stereo tape recorder
1 police type red light
1 programing device for automating above equipment

Program Evaluation

If the films "Drugs and Your Nervous System" and "Your Amazing Mind" are used, they must be purchased or rented.

In the spring of 1970 an evaluation of IMPACT PLUS TWO was conducted at Pomolita Junior High School in the Ukiah (Calif.) Unified

School District. A total of 650 students in the seventh and eighth grades plus 25 teachers were surveyed. It should be noted that although IMPACT PLUS TWO was designed for fifth and sixth graders, the Ukiah school district felt the program would best be implemented at the higher level.

Data were obtained by questionnaires. Teachers received questionnaires three times: twice before the program began, and once at the conclusion. Students were given preprogram and postprogram questionnaires on attitudes, frequency of drug use, and effectiveness of the program. The following statements summarize the major findings:

- Alcohol and tobacco (not covered in the program) were the most widely used drugs. Use of other drugs was reported by only a small percentage of students.
- When asked who they felt could best run a drug education program, 46 percent indicated ex-drug users and only 19 percent indicated schools.
- After the program was over, students who had earlier indicated they had used drugs were asked if they had decided to quit. One-fourth (N = 27) stated they decided to quite because of the program and three-fourths said the program had not swayed them to discontinue using drugs.
- Students who had earlier indicated an interest in trying drugs were asked in the post questionnaire whether or not they still wanted to try drugs. Half responded "no" and half responded "yes." Twelve of the 82 reported they had used drugs since the program.
- When asked, "Did the IMPACT PLUS TWO program give you all the information you wanted about drugs?" about equal numbers of students indicated "yes" and "no." When asked if they thought the information in the program was accurate and fair, all student scores fell into the middle range of a seven-point scale indicating mixed reactions.

The most interesting of the data collected from teachers deals with program effectiveness. Changes in time are indicated; Time III was after the program had been completed. The following results were reported:

Program effectiveness in:

	MEAN		
	Time I (N=25)	Time II (N=23)	Time III (N=21)
Keeping nonusers from experimenting?	3.9	3.7	5.3
Reducing experimentation among casual users?	3.4	3.3	3.7
Discontinuing or cutting down use of regular users?	3.2	2.6	2.6

(7 = very effective; 1 = not at all effective)

As a result of the evaluation, it was suggested that a program be designed specifically for junior high students in the Ukiah schools (WHY? was subsequently developed, is now in use, and evaluation data are being collected), that available human resource people such as exusers be included, and that a segment of the program be concerned with helping students already involved in drug use, rather than just concentrating on prevention.

The developers now recommend to schools that they include outside community people in their drug program; and many schools using the two programs report using enforcement officials, counselors, and some exaddicts. Both programs still deal almost exclusively with prevention.

Other California school districts using the IMPACT PLUS TWO materials have administered pre- and post-test report knowledge gains.

Current ERIC Entries on Drug Education Programs

The following references are from the ERIC journals Research in Education (RIE) and Current Index to Journals in Education (CIJE).

Copies of the documents which are abstracted in RIE are available in microfiche and hard copy at the prices noted, from the ERIC Document Reproduction Service (EDRS) P.O. Drawer 0, Bethesda, Maryland 20014.

Descriptive annotations are included with most of the entries in CIJE, but the articles themselves are available only from the journals in which they originally appeared.

Entries from Research in Education

Readings for the Institute for Drug Education at Syracuse. ED 054 427. 287 pp. MF-$.65; HC-$9.87.

White House Press Release on Drug Abuse. ED 054 460. 126 pp. MF-$.65; HC-$6.58.

Resource Book for Drug Abuse Information. ED 054 483. 123 pp. MF-$.65; HC-$6.58.

Motivations for Psychoactive Drug Use among Students. Getting High in High School. ED 055 282. 29 pp. MF $.65; HC-$3.29.

A Program for the Prevention of Drug Abuse, Kindergarten-Adult. ED 055 866. 28 pp. MF-$.65; HC-$3.29.

Drug Abuse, A Resource Guide for Educators. ED 056 894. 132 pp. MF-$.65; HC-$6.58.

Perceptions and Attitudes of Graduate Students Concerning Drug Use and Abuse in Elementary and Secondary Schools. ED 057 007. 56 pp. MF-$.65; HC-$3.29.

Entries from Current Index to Journals in Education

"How Schools Can Fight Drug Abuse." *Education Digest,* vol. 37, no. 2, pp. 17-20, Oct. 1971. EJ 043 643.

"Prescription for Drug Abuse Education: Managing the Mood Changers." *Journal of Drug Education,* vol. 1, no. 2, pp. 101-113, June 1971. EJ 043 648.

"How to Deal with the Drug Problem on Campus." *NASPA Journal,* vol. 9, no. 1, pp. 37-42, July 1971. EJ 043 657.

"Drug Education: A Position Paper." *Journal of Drug Education,* vol. 1, no. 2, pp. 123-136, June 1971. EJ 043 934.

"Education about Narcotics and Dangerous Drugs—a Challenge to Our Schools." *Journal of Drug Education,* vol. 1, no. 2, pp. 177-185, June 1971. EJ 043 940.

"Drug Education in the Seventies." *College Student Journal,* vol. 5, no. 2, pp. 17-19, Sept.-Oct. 1971. EJ 043 944.

"Drug Education and the Law." *Journal of Drug Education,* vol. 1, no. 2, pp. 157-170, June 1971. EJ 044 267.

"An Evaluation of Parent Drug Education." *Mental Hygiene,* vol. 55, no. 4, pp. 456-60, Oct. 1971. EJ 045 433.

"Youth in Trouble: III. Drug Abusers." *Today's Education,* vol. 60, no. 8, pp. 49-50, 79, Nov. 1971. EJ 045 436.

"Student Use of Drugs: Facts and Fables." *Education Digest,* vol. 37, no. 3, pp. 13-6, Nov. 1971. EJ 045 437.

"Developing a Drug Curriculum In the School System." *Journal of Drug Education,* vol. 1, no. 3, pp. 235-240, Sept. 1971. EJ 045 443.

"Approaches to Drug Abuse Prevention." *Journal of Drug Education,* vol. 1, no. 3, pp. 275-277, Sept. 1971. EJ 045 444.

"Approaches to Drug Abuse Prevention."*Journal of Drug Education,* vol. 1, no. 3, pp. 275-277, Sept. 1971. EJ 045 444.

"Approaches to Drug Abuse Prevention: Crusade vs. Facts of Life." *Journal of Drug Education,* vol. 1, no. 3, pp. 285-291, Sept. 1971. EJ 045 446.

"Drug Abuse Films: What are They Trying to Do?" *Audiovisual Instruction,* vol. 16, no. 6, pp. 83, June/July 1971. EJ 046 885.

"Groups Counseling in Drug Awareness." *School Counselor,* vol. 19, no. 2, pp. 123-126, Nov. 1971. EJ 046 958.

"Drug Education: Some Insights and Some Analysis of a Conceptual Approach." *Journal of*

Alcohol Education, vol. 16, no. 1, pp. 1-7, Feb. 1970. EJ 047 360.

"Drug Abuse Education: Many Hands of Help." *Journal of Alcohol Education*, vol. 16, no. 1, pp. 20-27, Feb. 1970. EJ 047 363.

"The Expectations of Teachers about the Content of 'Drug Education' for Them." *Journal of Alcohol Education*, vol. 16, no. 3, pp. 2-6, Spring 1971. EJ 047 365.

"Guidelines for School Drug Programs from the U.S. Office of Education." *Journal of School Education*, vol. 16, no. 3, pp. 32-33, Spring 1971. EJ 047 367.

"Drugs and the Learning Process: Behavioral and Cognitive Effects of Drugs Relevant to Education. Dissociations of Learning Produced by Common Drugs." *Audiovisual Instruction*, vol. 16, no. 6, pp. 88, June/July 1971. EJ 047 673.

Past PREP Reports

The following PREP reports are available only from the ERIC Document Reproduction Service, P.O. Drawer O, Bethesda, Maryland 20014, in microfiche (65 cents) and hard copy ($3.29). Order by the ED number provided for each report.

1—*Instructional Television Facilities: A Guide for School Administrators and Board Members.* ED 034 077.

2—*Reading Difficulties: Reading and the Home Environment. The Principal's Responsibility.* ED 034 078.

3—*Establishing Central Reading Clinics: The Administrator's Role.* ED 034 079.

4—*Correcting Reading Problems in the Classroom.* ED 034 080.

5—*Treating Reading Disabilities: The Specialist's Role.* ED 034 081.

6—*Bilingual Education.* ED 034 082.

7—*Research for School Board Members: School-Community Relations.* ED 034 083.

8—*Research for School Board Members: Teacher Militancy, Negotiations, and Strikes.* ED 034 084.

9—*Job-Oriented Education Programs for the Disadvantaged.* ED 034 085.

10—*Seminar on Preparing the Disadvantaged for Jobs: A Planning Handbook.* ED 034 086.

11—*Research on Elementary Mathematics.* ED 034 087.

12—*Paraprofessional Aides.* ED 034 906.

13—*Sharing Educational Services.* ED 036 666.

14—*Social Studies and the Disadvantaged.* ED 037 588.

15—*Student Participation in Academic Governance.* ED 038 555.

16—*Individualized Instruction.* ED 041 185. (Hard copy, $6.58)

17—*Microteaching.* ED 041 190.

18—*Reinforcing Productive Classroom Behavior: A Teacher's Guide to Behavior Modification.* ED 042 061.

19—*Migrant Education.* ED 042 936.

20—*Teacher Recruitment and Selection.* ED 043 797.

21—*Teacher Evaluation.* ED 044 546.

22—*A Readiness Test for Disadvantaged Preschool Children.* ED 047 168.

23—*Educational Cooperatives.* ED 048 521.

The PREP Reports which follow these are available from the U.S. Government Printing Office as shown on the inside front cover of this issue.

ERIC DOCUMENT REPRODUCTION SERVICE
LEASCO INFORMATION PRODUCTS, INC.

P.O. Drawer O, Bethesda, Md. 20014

PREP REPORTS

ON-DEMAND ORDER BLANK

L TO: _____ SHIP TO: _____

_____ _____

_____ _____

_____ _____

RCHASE ORDER NO. _____

REPORTS TO BE ORDERED

M	ED Number	Number of Copies MF	Number of Copies HC	PRICE	TOTAL PRICE
1					
2					
3					
4					
5					

] TAX NUMBER _____ SUB-TOTAL

] DEPOSIT ACCT. NUMBER _____ TAX

CHARGE (OVER $10.00) _____

] CHECK NUMBER _____ TOTAL

Quality warranty. LIPCO will replace products returned because of reproduction defects or incompleteness. The quality of the input document is not the responsibility of LIPCO. Best available copy will be supplied.

Indicate payment method desired. Payment must accompany all orders of $10.00 or less. Make all drafts payable to EDRS.

Sign AUTHORIZATION and date order.

AUTHORIZATION _____ DATE _____

TITLE OR DEPT. _____

MAKE ALL DRAFTS PAYABLE TO EDRS

Orders are filled only from ED accession numbers. Titles are not checked. *Please be sure you have supplied the correct numbers.*

ERIC DOCUMENT REPRODUCTION SERVICE is operated by Leasco Information Products, Inc. for the U.S. Office of Education.